the OIL AND GAS JOURNAL

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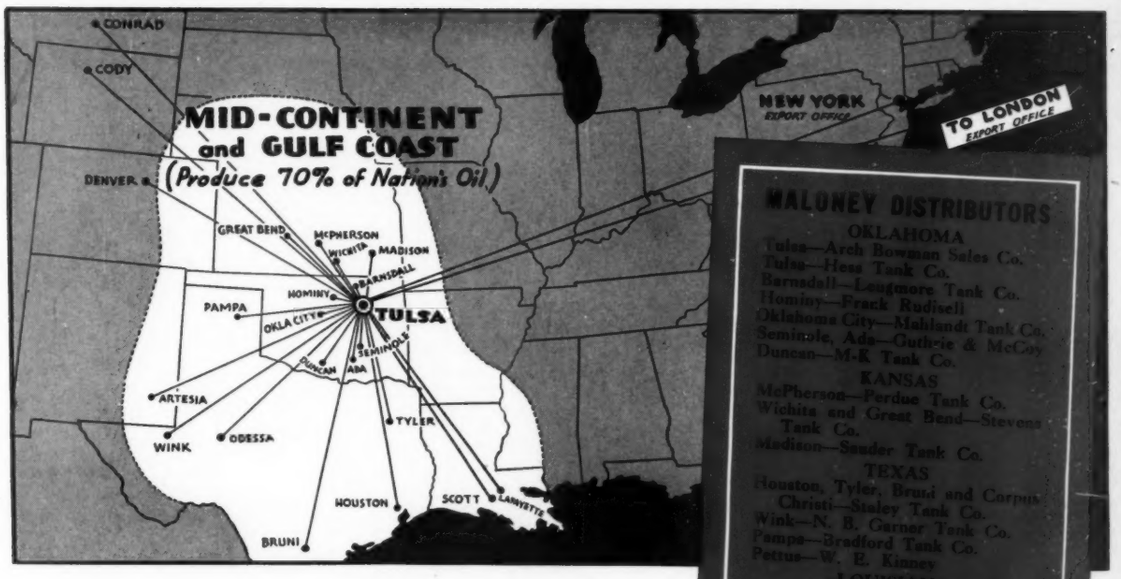

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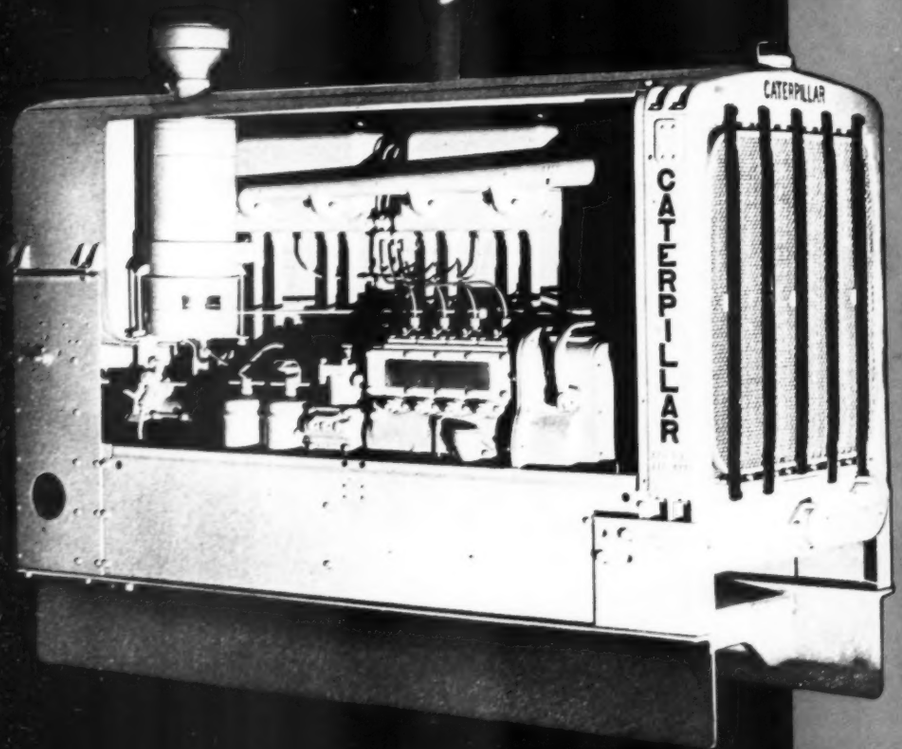

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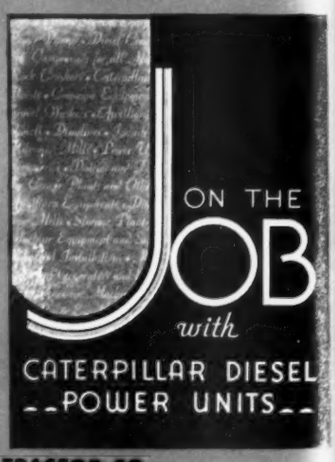

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IT CEASED TO BE NEWS *Years ago!*

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The 9750 foot string of 7" O. D. 28 lb. casing was the longest ever set in the Gulf Coast . . . The equipment used included . . . Baker Cement Floating Equipment, both collars and shoes . . .
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California Cut Is Local in Effect Unless Situation Continues for Long Time

By ANDREW M. ROWLEY

DRASTIC REDUCTIONS in the posted prices of the lighter gravity crudes in California, announced last Thursday, were entirely expected. Failure of a number of operators to conform to the curtailment program and unwillingness to agree to the plan assuring an outlet for all crude produced in accordance with proration regulations brought the inevitable result. Production in the state during August averaged approximately 600,000 barrels daily while the allowable based on estimated consumer demand was 530,000 barrels, excess output averaging 70,000 barrels daily with no prospect of being reduced.

The larger purchasers of crude oil were reluctant to cut prices and maintained their higher schedules as long as there seemed to be any possibility of operators agreeing on a sound program of conservation and curtailment. But when all efforts to procure agreement on the proration plan failed the price reductions were made with the higher gravity fields being penalized the most as those fields were largely responsible for the excess production.

Chief concern of the rest of the country is how long the period of low prices in California will last. The general feeling is the higher schedules will be restored within a short time but this depends entirely on whether operators curtail production quickly. The situation is not new in California, drastic price reductions having been made there before for exactly the same reason. And higher prices always were restored immediately upon production being brought down to the level of consumer demand.

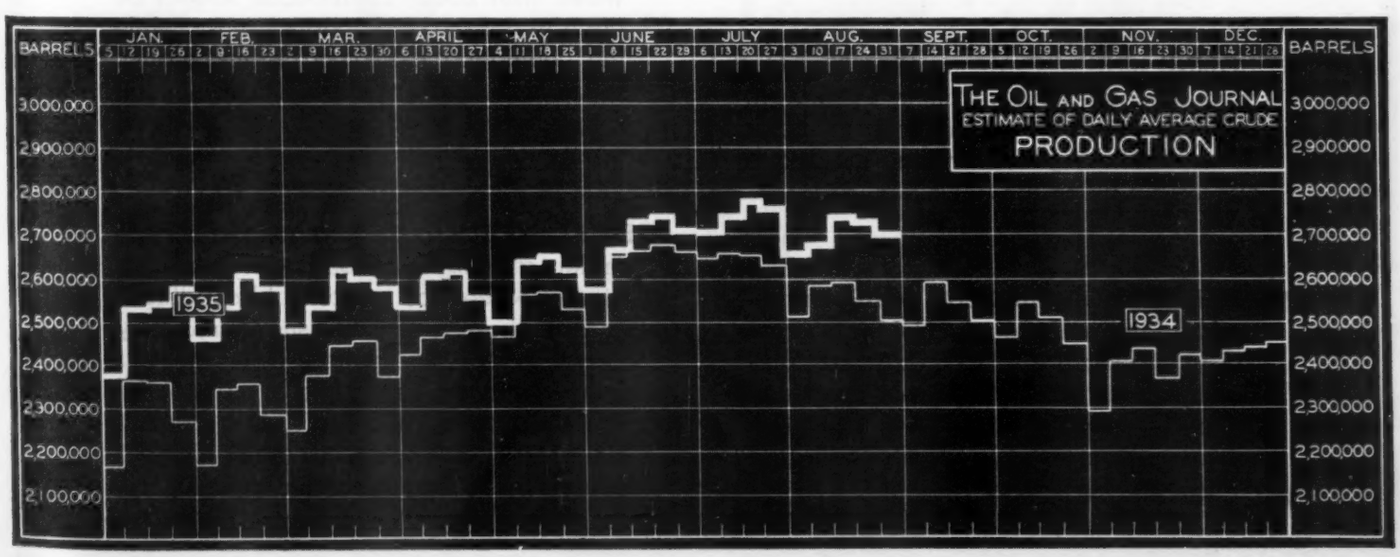
Unless low prices in California prevail over a fairly long period, price schedules in other parts of the country probably will not be affected to any extent. The present uneasiness prevailing in some quarters is due to uncertainty as to the duration of low price period in California. Continuation of excessive production will hold prices down and the combination of low prices and overproduction would be reflected in other parts of the country as California producers and refiners would dump their excess products at distress prices.

The Rodessa area in northwestern Louisiana still holds the greatest interest in field operations. Tests north and east of the discovery oil well are getting close to the producing horizon so much more will be known of the potentialities of the section soon.

Production 2,702,808, Decrease 32,412

Estimated daily average production for the week ending August 31, a comparison with previous week and one year ago follows:

	Aug. 31	Aug. 24	Sept. 1, 1934
Oklahoma—			
Oklahoma City	127,750	141,350	137,500
Seminole-St. Louis	93,825	99,725	82,490
Remainder of State	250,125	253,950	240,560
Total Oklahoma	471,700	495,025	460,550
East Texas—			
Lathrop	167,527	165,317	206,820
Kilgore	155,734	156,630	159,393
Joiner	154,927	155,318	138,044
Total East Texas	478,188	477,265	504,257
West Texas	150,739	150,085	146,296
North Central Texas	83,148	82,945	93,347
Texas Panhandle	56,530	56,108	57,678
East Central Texas	46,856	46,387	58,761
Gulf Coast—Texas	187,330	187,047	178,744
Southwest Texas	59,450	58,229	57,465
Total State of Texas	1,062,241	1,058,066	1,096,548
Kansas	139,750	141,375	128,000
Louisiana—			
North Louisiana	24,555	24,685	24,520
Gulf Coast—Louisiana	116,649	117,247	73,458
Total Louisiana	141,204	141,932	97,978
Arkansas	30,290	30,165	31,440
Eastern Fields (except Michigan)	101,000	103,500	101,750
Michigan	48,033	45,807	33,465
Rocky Mountain area	112,840	109,850	99,820
California—			
Santa Fe Springs	48,400	45,750	36,600
Long Beach	77,100	78,500	53,900
Mountain View	35,750	36,750	8,100
Elwood	12,000	12,300	12,100
Kettleman Hills	80,100	76,250	66,800
Remainder of State	342,400	359,950	282,500
Total California	595,750	609,500	460,000
Total United States	2,702,808	2,735,220	2,509,551



The Bulletin Board

DEVELOPMENT WORK in the Rocky Mountain area is retarded through difficulties arising from stipulations of the federal Government which handicap operators in drafting a practical plan of unitization.

DETROIT GAS LINE assured by contract closed between Detroit Gas Co. and Columbia Gas & Electric Co., which will extend Panhandle Eastern line to the Michigan metropolitan district.

SALT WATER disposal wells are described as the solution of the problems of operators in Kansas fields, through new law permitting return of salt water to nonproductive formations and specially drilled wells for this purpose.

REPRESSURING OPERATIONS are greatly affected by the properties of the crude oil due to the physical changes in viscosity and surface tension that are made in a crude oil as a result of a solution of gas. Due to channeling and by-passing of the gas through the oil the operator must choose for himself what mass velocity is best for his repressuring system.

GASOLINE LINE of Keystone Pipe Line Co. from Mechanicsburg, Pa., to Pittsburgh, Pa., being constructed under exceptional difficulties owing to rocky and mountainous terrain along the route.

POLYMERIZATION PROCESS CORP., organized by Phillips Petroleum Co., with Texas Corp., Standard Oil Co. (Indiana) and Standard Oil Co. (New Jersey) interested through exchange of patents. Patent licenses to be available to petroleum and natural gas industries.

CALIFORNIA REDUCTION in crude prices forced by continuous overproduction may be overcome by renewed efforts now being made to obtain signatures to the producers curtailment agreement.

THE WELL DIAMETER has an important influence upon the efficiency of oil recovery, a large diameter well possessing a higher rate of oil flow as compared to a well of normal diameter when producing under comparable conditions.

ETHIOPIAN OIL CONCESSION which startled the world because of complications latent in the Italo-Ethiopian conflict, and which was objected to by the British and American governments, has been abandoned by the company interested.

FUTURE OF OIL in America and what the years ahead hold for us is discussed in an interesting article by Wallace E. Pratt, vice president of the Humble Oil & Refining Co.

WATER SOFTENING by treating the feed water with boiler compounds should be done under expert supervision, for while the compound may successfully reduce water hardness it might also result in corrosion, foaming, or caustic embrittlement.

SPECIAL STEELS that will give long service under atmospheric conditions may not give good service under fluid conditions such as those to which a sucker rod may be subjected. The causes of sucker rod failures may be due to one or more of the following conditions: incorrect practices, electrolysis, corrosion, or embrittlement caused by hydrogen sulphide gases.

One Must Die

—Drawn Exclusively for The Oil and Gas Journal.

Unusual Difficulties Are Encountered in Laying Keystone Gasoline Line

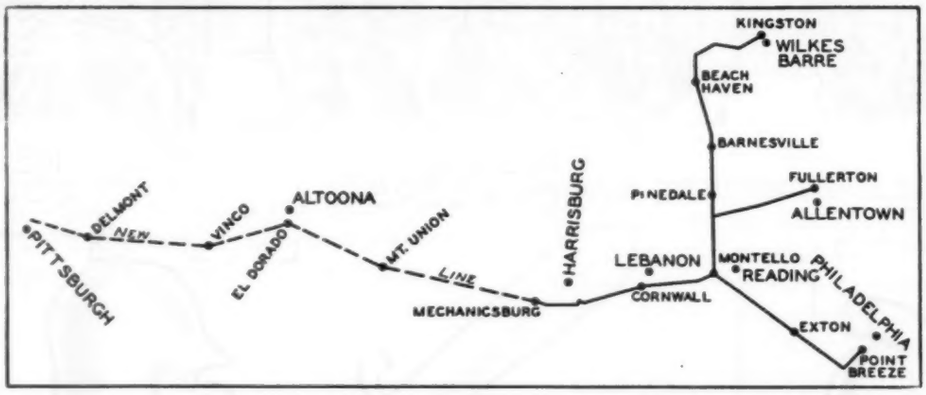
By R. C. CONINE

HOLLIDAYSBURG, PA.—Accustomed to moving along at a rate of 6 to 8 miles a day, the pipe line construction crews extending 8-inch gasoline artery of the Keystone Pipe Line Co., a subsidiary of Atlantic Refining Co., from Mechanicsburg, Pa., to Pittsburgh, Pa., are having easy going when they can chalk up more than a mile in a day's work. Rock is the principal obstacle and right now, some 60 miles out of Mechanicsburg, the blasters are let down by ropes to place their drill holes, and mechanical ditching methods are out of the question.

The Keystone Pipe Line Co. has been busy since the latter part of June on this extension of its system of lines, now serving eastern Pennsylvania from Mechanicsburg, Pa., in Dauphin County, near Harrisburg, and pressing westward across the Allegheny Mountains toward Pittsburgh.

The section now under construction, a distance of approximately 170 miles, is all 8-inch seamless tubing, having belled ends, which allow for the insertion of a chill ring. The joints are then electrically welded by running two beads.

Approximately 25 miles west of Mechanicsburg, which is the last terminal of the present system, the course of the line runs practically continuous for a distance of almost 60 miles over mountains, some of which are extremely rough and jagged, presenting many construction difficulties. At some points there are no available roads within 2 to 4 miles of the right-of-way. These kind of places made the stringing very hard and it was necessary to carry the pipe in a joint at a time. Along some of the slopes of the hills there was nothing but large rolling stones, while in other places solid rock was encountered. Such conditions as these do not facilitate progress of construction and, at the present time, something like 60 miles of line has been completed.



Gasoline pipe line system of the Keystone Pipe Line Co. from Mechanicsburg to Pittsburgh

There are four principal river crossings, all having rock bottom; however, none of the streams are very deep, but, due to ice conditions during the winter months, it will be necessary to bury the lines across the rivers to such a depth that they will not be injured by sliding ice.

Four additional terminals will be added to the system by this extension, the first being a short distance out of the town of Mount Union, where also will be located a pumping station. Proceeding west, the next terminal is located just out of the city limits of Altoona, from which will be made deliveries by both rail and trucking facilities; then comes the plant in the vicinity of Johnstown, and next, a short way north of Greensburg, will be a take-off point for a terminal called Delmont.

Four additional pumping stations will be required, all of which will be electrically driven. Some of the pumping equipment will be centrifugal pumps and the balance reciprocating pumps.

Toward the western end of the line the streams contain very corrosive water from mines, so special protective coatings were necessary at these points, and at a few other places which soil analysis and resistivity measurements indicated corrosion may take place.

Photographs do little justice to the difficulties encountered in this mountainous terrain, and words even less. Where there is enough soil to save a foot or so of blasting, there are tree roots after the heavy growth of weeds and brush are cleared which dull an axe in a dozen strokes. The crews on Bush Mountain near Hollidaysburg, haul themselves up sides of sandstone to jockey pipe into place as it is skidded down. The lengths are welded in the lowlands and drawn up by winches where possible. Often sharp rises are encountered which are inaccessible to the heavy machinery required to draw up the pipe. At these places the handlers and welders assume the role of acrobats and strong men. As one of the bosses said, "it is hard to realize how handy machinery is until you get on a job like this." Where the going is better the dense growth of trees does not permit the use of large, heavy tractors.

Tractors are often perched precariously on the mountainous trail of the Keystone line

Mining or boring under roads is a frequent necessity in the mountain ranges crossed

Imperial Purchases Refinery

CALGARY, Alberta, Sept. 2.—Announcement has been made that Imperial Oil, Ltd., which recently acquired the Regal gasoline service stations in Calgary and Edmonton, has purchased the Regal refinery in Calgary and the pipe line to the Turner Valley Field. The refinery is being dismantled.

Reductions in California Crude Price Forced by Continued Oversupply

By L. P. STOCKMAN

The inevitable outcome of excessive overproduction of oil and failure to conform with curtailment has resulted in a drastic reduction in California crude prices and a complete breakdown of the proration program. The Central Committee of California Oil Producers, official curtailment committee, has temporarily folded up and the oil umpire's office has been reduced to a skeleton as its only duties will be of a statistical nature unless operators get together and formulate a new curtailment program which assures rigid compliance. The oil umpire, due to collapse of the last curtailment program, will not send out any allotment schedules and operators can produce as they will.

Standard Oil Co. took the initiative and the new price schedule became effective August 29. Union Oil Co. followed with a schedule effective August 30 and other companies met the new prices which represent a maximum reduction of from 50 to 60 cents per barrel on the lightest grades. This is the first change in crude prices since September 6, 1933, and marks a return of the inverted schedule Union Oil Co. put into effect on March 30, 1931. Under the present setup, heavy crude commands more money than light refining grades. Kern River crude testing 12 degrees A.P.I. is quoted at 52 cents per barrel, the same price quoted for 27 gravity Santa Fe Springs crude. Playa Del Rey crude now brings a top price of 36 cents per barrel while the top at Kettleman Hills is 56 cents.

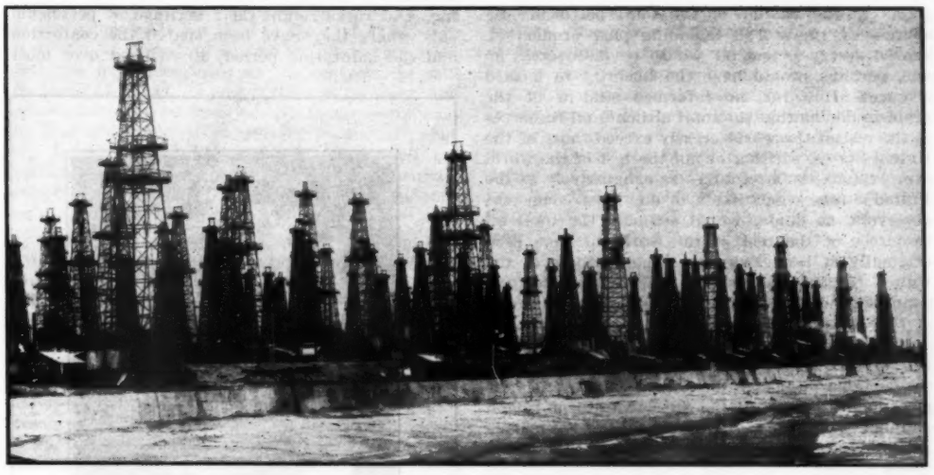
Taking the Signal Hill (Long Beach) price cuts as indicative of the average reductions made in all fields it is seen that all crudes from 16 gravity upward are affected, and that the higher the gravity the greater is the reduction in price. Seal Beach old and new prices and the extent of the price cuts follow:

Degrees gravity—	Old price (cents)	New price (cents)	Reduction (cents)
14-14.9	.65	.65	...
15-15.9	.65	.65	...
16-16.9	.66	.63	.03
17-17.9	.69	.61	.08
18-18.9	.72	.60	.12
19-19.9	.75	.58	.17
20-20.9	.78	.57	.21
21-21.9	.81	.56	.25
22-22.9	.84	.55	.29
23-23.9	.88	.54	.34
24-24.9	.91	.53	.38
25-25.9	.94	.52	.42
26-26.9	.97	.51	.48
27-27.9	1.00	.50	.50
28-28.9	1.03	.49	.54
29-29.9	1.06	.48	.58
30-30.9	1.09	.47	.62
31 and over	1.09	.46	.63

Not a Surprise

This inverted schedule may be changed if producers follow tactics similar to those adopted in 1931 and we may find heavy grades given a substantial reduction later if the situation gets beyond control. Marketers are endeavoring to maintain present prices of fuel oil and at the same time penalize those light oil fields that have been primarily responsible for the present condition. Under the original inverted price schedule put into effect in March, 1931, operators inserted steam pipes and coils in their shipping tanks and vaporized the lighter fractions and then sold the lean crude to buyers at a higher price than would have been received for raw crude. In some cases operators decreased the gravity of crude 8 and 10 degrees by superheating. The inverted schedule which became effective March 31, 1931, prevailed until June 19, 1931, at which time Standard posted a schedule ranging from 65 cents per barrel for heavy grades of crude oil to 77 cents per barrel for 28 gravity Long Beach crude.

The downward revision did not come as a surprise. The utter indifference of producers was clearly evident when only 60 operators attended a recent meeting of Long Beach producers at which L. P. St. Clair, president of Union Oil Co., had been asked to speak. Operators have overcome serious crises in the past and may possibly by Herculean efforts straighten out local conditions although leaders are dubious that an early readjustment can be made. Producers, despite several warnings, have jeopardized the price structure by excessive overproduction for 60 days and the severe cut is the logical outcome. Purchasing companies have been extremely reluctant to reduce the posted price but could not cope with excessive production during the approaching winter as crude and refined prices were entirely out of line and operators did not show any inclination to bring production down to the amount set by the curtailment committee.



View in the Huntington Beach Field, California

Where Crisis Differs

The present crisis differs from previous situations because now that the curtailment program has been thrown overboard operators will have to start all over again. The Central Committee of California Oil Producers adjourned subject to call if operators eventually decide to resume curtailment and the oil umpire will keep part of his staff to take up the job again on short notice. It may be difficult to re-establish curtailment because buyers will demand assurance operators will rigidly conform with any program outlined. Failure to approve the crude purchase contract submitted for consideration several weeks ago or to formulate some other plan which would accomplish the same results cleared the way for the downward revision in prices. Production in California during August was approximately 600,000 bbls. per day in contrast with a prescribed allowable of 530,000 bbls. This excess of 70,000 bbls. per day was an important factor contributing to present conditions.

The reduction in crude prices will ultimately result in lower prices for products and cause serious financial losses to producers, refiners and marketers. Cheaper crude will permit reopening of several small plants shut down during the past two months and the ensuing competitive struggle will result in the sale of gasoline below cost due to periodic dumping of distress gasoline by small refiners.

Although there is a possibility major buyers may cancel day-to-day contracts for the purchase of crude and produce their own crude, it is not likely this policy will be adopted. The logical procedure would be for marketers to restrict their own production and buy all oil offered at present low prices. Kettleman Hills, North Belridge and other closely held areas will probably restrict production to a minimum and remove any cause for alarm from this direction. This would permit operators at Long Beach, Huntington Beach, Playa Del Rey and Mountain View to produce wide open. As a matter of fact Long Beach is practically wide open at present and has been producing to capacity for 30 days. Shell and other major companies have about 6,000 bbls. per day shut in but to all intents and purposes this field is wide open and could not increase its production to any substantial effect. There is sufficient empty storage to handle normal expectations and by next spring these fields will cease to be the disturbing factors they have been during the past year. The Palisades section of Playa Del Rey Field will pass out of the picture in less than two weeks and Mountain View should be well on the down grade within 60 days if permitted to produce unrestricted.

Standard's Statement

When issuing its new price schedule, Standard Oil Co. issued a statement that "since the first of June there has been an increasing tendency to break away from proration until at the present time crude oil production is in excess of 600,000 bbls. per day as against an estimated consumptive demand, estimated by the U. S. Bureau of Mines, of less than 520,000 bbls. per day. With the passing of the season of peak demand for petroleum, the company is confronted with large additions to storage which it is unwilling to undertake, if at all, at the present level of crude oil prices. A very large percentage of producers have been working diligently since the first of June to bring about a voluntary agreement of proration in an effort to keep production within consumptive demand. These efforts have not been successful. When it is again demonstrated that production can be controlled to keep within consumptive demand it is to be hoped conditions will justify a return to higher prices. This company holds no contracts for the purchase of crude oil which a seller who does not wish to accept these prices cannot cancel either immediately or upon 10 days' notice, according to the form of the agreement, and the company has a similar right to cancel out its day-to-day contracts immediately."

Future of Oil in America as Viewed in the Light of Present Developments

By WALLACE E. PRATT
Vice President Humble Oil & Refining Co.*

The production of oil is peculiarly an American industry. Of the world's total past oil production, amounting to about 26,500,000,000 bbls., roughly two-thirds, or nearly 17,000,000,000 bbls., has come from the United States. Of the proven reserves of oil in the world today, amounting to somewhat less than 25,000,000,000 bbls., approximately one-half is within the United States.

As to the volume of the total petroleum resources of the world, including past production, proven reserves, and oil yet to be discovered, no one, perhaps, would have the temerity to hazard a guess. However, no informed student of the problem doubts that the total ultimate oil resources in the rest of the world greatly exceed those of the United States, whether or not the rest of the world ever exploits their resources as exhaustively as the United States seems likely to do. Most competent observers, no doubt, would estimate the total oil resources of the rest of the world to have been originally at least twice as large as those of the United States; many would believe that the preponderance of foreign total resources is even greater than this ratio indicates.

Oil fields are invariably creatures of the shore processes of former seas. Just as coal results from the metamorphosis of the organic matter of former plants, buried in the fresh waters of inland swamps, so oil forms from the remains of the marine life that is entombed in the muds of shallow-sea floors.

In earth history, although the oceans proper occupy relatively permanent basins, the shallow marginal seas come and go. For a space of time the continents of the earth subside and the oceans encroach over their low-lying edges. Muds and sands, washed into these seas by rivers from the adjacent land, are spread out in thin, alternating layers at a rate which compensates roughly the continuing subsidence. Thus the seas near shore remain always roughly constant in depth, yet, frequently, deposits of river-borne sediment are built up on their sinking floors to an aggregate thickness of thousands of feet. But not inorganic sediments alone fall to the bottom of these shallow seas. The tiny denizens of the sea itself—the myriad life forms that abound in marine waters—dying, sink and are entombed in the successive layers of sea-floor ooze. Salted with the brine of its former habitat, this buried organic matter becomes a potential source of future petroleum deposits.

The wheel of earth history turns, and for a space of time the continents rise again. From their margins the seas retreat, and that which had been sea floor now becomes dry land. The muds and sands of the former sea floors, compressed by the forces of this movement and by their own weight are now compacted into rocks. Their content of brine-soaked organic matter, subjected to the same pressures and to the rising temperatures generated by the accompanying friction, is slowly converted into oil and gas. The muds, growing denser, yield their fluids—oil, gas and salt water—into the pore spaces of the interbedded sands, and continued movement of these fluids through porous rocks finally segregates one from the other. Thus are oil fields formed, and thus is a cycle of earth rhythm completed—only to repeat itself again and again as our planet whirls on through space.

Which Rocks Are Oil Bearing?

Now an oil deposit by its very nature is an evanescent creature. It cannot survive excessive pressure, nor excessive temperature, such as inevitably arise when earth movements become severe in the travail of mountain building. Under continued or extreme heat and pressure, oil is finally transformed into gas. Only in areas of prolonged and uncommon earth quietude do oil deposits persist through geologic ages. Ordinarily those oil fields formed in a geologic yesterday are destroyed in a geologic tomorrow.

Thus it is, generally speaking, that only the geologically young rocks of the earth are oil bearing. Old rocks retain their heritage of petroleum only where they have been spared the contortion and the induration periodically visited over most of the earth's crust by its rhythmic pulsations. Oil pools do not survive in old rocks except where, by chance, they escape severe deformation. Even geologically young rocks lose their content of petroleum if they are subjected to extreme earth movements.

WALLACE E. PRATT

If a geologic time scale were devised which divided the entire duration of life on earth into 100 equal units, and if these units, for convenience, were designated as years, then of all the oil found in the United States so far, 37 per cent would have been contained in the rocks of the sea floors laid down during the last three of these geologic years; 57 per cent of the total discoveries would have been made in the rocks formed during the last 10 years of the time scale; and only 43 per cent of the oil we have found would have been contained in the rocks formed during the preceding 90 years. It follows that from the rocks formed within a given length of time, the most recent rock-group defined above yields us 25 times as much oil as the oldest group, and four times as much oil as the group of intermediate age. Outside the United States, our finding experience emphasizes even more strongly the predominance of geologically young rocks over old rocks as sources of oil.

Out of this tendency of petroleum deposits to endure only briefly through geologic time, it has come to pass that there are on earth today two petroleum-bearing provinces of surpassing importance. One is the mediterranean area of the old world, including, in addition to the environs of the Mediterranean Sea proper, the region adjacent to the Persian Gulf, the Black, the Red and the Caspian Seas. The other is what may well be called the mediterranean area of the new world, including the environs of the Gulf of Mexico and the Caribbean Sea. These are the areas where shallow seas have persisted into recent geologic time. These are the areas where, beyond all others on earth, organic muds and interbedded sands have been laid down on sea floors in profusion during comparatively recent geologic time, and have remained only slightly disturbed or deformed by subsequent earth movement. Under such conditions oil pools are formed and preserved for man to exploit. It should not surprise us, then, to find that from these relatively small segments of the earth's crust comes more than 50 per cent of all the oil man has so far discovered.

To a lesser degree, parts of the margins on both sides of the Pacific Ocean were sites of shallow marine waters in recent geologic time, and are consequently prolific sources of oil, but severe earth movement has dissipated much of the oil originally contained in the geologically young rocks of the Pacific province. In geologically old rocks over the earth's surface oil is found in important quantity only where, through geologic time, the earth's crust has been relatively stable and little disturbed; such areas are the mid-continental regions, particularly the Mississippi Valley of the United States and the plains on either side of the Ural Mountains in Russia and Siberia.

The Oil-Mine of Texas

The State of Texas is actually and potentially the most prolific source of petroleum in the United States today. Producing more than 40 per cent of the current supply, possessed of nearly 50 per cent of the Nation's proven reserves of oil, Texas is at the same time the only major producer of oil whose proven reserves exceed its past production. Texas constitutes much of the border of the mediterranean region of the new world as it has been defined. Nearly one-half of its area looks out upon the Gulf of Mexico and is underlain by geologically young rocks, relatively but little disturbed, of a character admirably suited to contain oil deposits.

But Texas has not always looked southward to the sea. In an earlier geologic era much of the region now occupied by the Gulf of Mexico was given over to lofty, snow-capped mountains, and in that time the land we know as Texas looked out to sea northward across warm, shallow, marine waters which covered its present northern and western portions. In this ancient sea, also, oil deposits were formed and fortuitously, although the containing rocks are now geologically old, subsequent earth movements have not greatly distorted them, and their oil pools are preserved for man's use. So it is that Texas abounds in source rocks for oil. Practically every rock series that yields oil in notable quantity anywhere else in the world has its oil-bearing counterpart in Texas.

In recent years the oil-producing industry has increased the maximum depth to which it can drill from 6,000 or 7,000 feet to 10,000 or 11,000 feet. At the moment a well is drilling in Texas at a depth of more than 12,000 feet, the deepest well in the world. But over much of the United States there is no occasion to drill so deep in search of oil. Very generally throughout this country a depth of 10,000 feet carries the drill into rocks so dense that no oil deposits can exist in them. Only over a small part of oil-producing area can we hope for

*From The Lamp.

commercially profitable fields at the extreme depths to which we now drill.

The oil-producing industry is commonly thought of as a prosperous, money-making enterprise, whose effort has yielded it marvelous profits. That this conception is ill founded is revealed by the briefest analysis of the record. From the date of its inception in 1859 to the end of the year 1934, the American oil industry has produced 16,700,000,000 bbls. of oil. During the same period it drilled 825,135 wells in search for oil, including 191,870 dry holes. In return for its effort, the producing industry has received out of the sale of its part of the total production a little more than $17,000,000,000. If one knows anything of the cost of producing oil he is immediately struck with the suspicion that the producing operation so far cannot have been very profitable.

"Profits" in Oil

If the record be examined more closely, it appears that during the period from 1859 to 1900, inclusive, the oil-producing industry in the United States drilled 173,045 wells, of which 32,000 were dry holes, and from which 1,007,072,000 bbls. of oil had been produced by the end of the period. For his part of this production the producer received $895,230,000, the average price being a little more than $1 per barrel. His return, through this period, amounted to $5,200 per well. Inexpensive as these old wells were, drilling and equipping costs must have consumed most of the producer's income.

From 1901 to 1919, inclusive, the oil-producing dustry drilled 349,586 additional wells, 71,176 of which were dry holes, and produced 4,041,662,000 bbls. additional oil. During this period the producer received from the sale of his share of the oil produced $3,707,000,000, again barely more than $1 per barrel. His gross income per well drilled during these years amounted to $10,600. Wells had become deeper, more expensive.

From 1920 to 1934, inclusive, the oil producer drilled 302,504 additional wells, of which 87,919 were dry holes, and produced 11,658,692,000 bbls. additional oil. During this period he received from the sale of his share of the oil produced $12,760,000,000, or $1.30 per barrel; his income per well drilled amounted to $42,000. For this period the cost of drilling wells and of equipping producing wells is easily arrived at since complete records of representative experience are available. On the basis of such records, drilling and equipment costs alone amount to not less than $25,000 for the average well drilled by the producing industry, or to 75 cents for each barrel of oil sold for the account of the producer, between the years 1920 to 1934, inclusive. In addition to costs of drilling and equipping wells, the producer must acquire his leases, discover his oil, lift it to the surface after his wells are completed, and pay his taxes and overhead. Estimates based on actual representative experience show that these items combined amounted to a little more than the total cost of drilling and equipping wells in the case of the average producer, during the period under review. The oil for which the average producer received $1.30 per barrel during this period, then, actually cost him $1.50 per barrel.

This is the period of greatest activity the producing industry has known; it is the period of highest average prices—during it the bulk (70 per cent) of our total oil recovery to date was produced and marketed. The average cost of drilling and equipping wells per barrel of oil produced during this period is probably not greatly different than the average cost over the life of the producing industry: at any rate with the lower average prices there could not have been much profit on the oil produced in earlier years.

It is obvious that the production of oil in America has not been a profitable venture up to date. Individual units in the industry have, of course, made large profits from time to time, through good fortune, or efficiency, or some other cause. On the whole, however, the producing industry has operated at a loss. In this respect it is like another industry, gold mining, of which it has become axiomatic to say that "more gold has gone into the ground than has ever come out."

This experience of the oil producing industry throws a revealing light on the practical operation of the capitalistic system. Impelled solely by the profit motive, the oil producing industry has served society efficiently and adequately, judged by the standard of prices paid by the consumer, through one generation after another, yet the whole service has been rendered at less than average cost. Communism condemns capitalism for its profit motive, and would supplant it with a profitless economy, yet in this instance capitalism has successfully carried out a formidable undertaking against great odds without any over-all profit. It is worth while to realize that even where no actual profit is forthcoming, the lure of a possible profit, the hope of a future profit, is incredibly effective in spurring men on to vigorous and sustained effort.

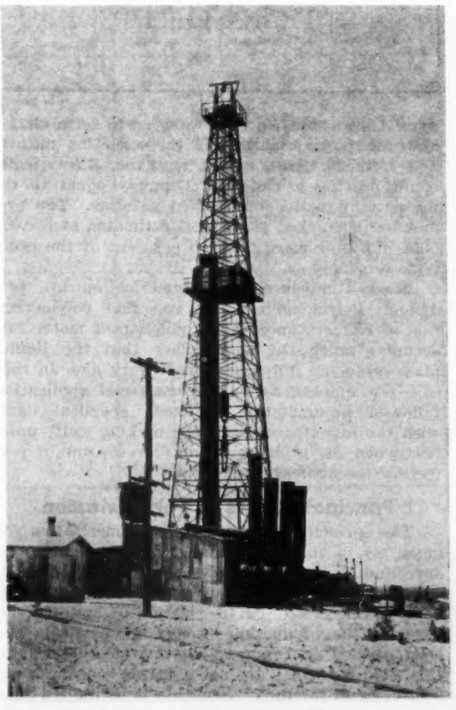
The Eternal Search for Oil

The ultimate profit or loss to the oil producer will not be determined, of course, until he has produced the balance of the oil he has already developed. The average producer, after 75 years of profitless effort, still hope for a profit in the future. His proven reserves at the moment amount to 10,000,000,000 or 12,000,000,000 bbls., and a considerable part of the expense of producing this reserve has already been met. Doubtless he would make a profit on the production of this reserve, assuming that the average price for oil is as high in the future as it has been in the past, if he were merely to sit down and deplete his present reserves. But this he will not do; on the contrary, he will continue to go out, as he has done in the past, and search for new oil reserves. It is necessary that he should do this. Whenever the producing industry fails to make adequate new discoveries, the refining industry will be driven to supplement its supply of crude oil by imports or adoption of a substitute raw material.

A little further analysis will reveal that the average oil producer faces a real job when he sets out to find more new oil fields to maintain his present production. His future finding costs will absorb much of the future profit which he anticipates. The producing industry has in proven reserve about 12 times the amount of its present annual production. Probably the ratio of proven reserves to annual requirements should not fall below this figure. Other essential mineral industries, such as coal, iron and copper, maintain proportionally much greater reserves. To maintain the present proven oil reserve, in view of the anticipated future demand, will require the discovery of about 1,000,000,000 bbls. of new oil each year over the next decade.

Average annual discoveries increased rather regularly from 1859 to 1925, but the next half decade, 1926 to 1930, showed a tremendous increase—more than double the highest previous annual average—and the final four years, 1931-1934, showed an equally sharp decline to a figure lower than any other average year since the 1911-1915 period. Our highest discovery rate over a five-year period has been nearly 2,000,000,000 bbls. per year; over a 10-year period, 1,400,000,000 bbls. per year. Over the last four years our average rate has been only 580,000,000 bbls. per year. During the five-year period of our highest discovery rate (1926-1930) the industry found more than one-third of all the oil it has ever found and nearly all of its present major fields, including Yates, Kettleman Hills, Oklahoma City, East Texas and Conroe.

The rate of discovery curve climbs gradually to a conspicuous maximum in the period 1926-1930 and then slumps off sharply to a point lower than it has been for nearly 20 years. To one who has followed discovery experience the shape of this curve is significant. The growing rate of discovery, through the early periods reflects, first, the application of geological principles to the problem, beginning about 1915; second, the greatly accelerated effort to find oil, following the war; and, third, the culminating advantage which came with the introduction of geophysical methods of finding in 1926. The slump following 1930 is a reflection of the failure of finding technique, in spite of all efforts and all improvements, to cope with the task of maintaining the established discovery rate in the face of the ever smaller number and the greater obscurity of the pools remaining to be discovered. Even the recent remarkable progress in deeper drilling has not sufficed to overcome the growing difficulty. To find an average of 1,000,000,000 bbls. per year over the next decade promises to be a formidable assignment.



The deepest well in the world, drilled to 12,786 feet in Upton County, Texas

The Future of Oil in America

Whatever may be said in criticism of the American oil-producing industry and its operation in the past, there will be no denial of its effectiveness in attaining the prompt and complete development of our petroleum resources, and in making oil available to the consumer at low prices, in comparison with the experience of other nations. Great social and economic advantage has come to the United States as a result of this rapid development of its oil resources. Nearly two-thirds of the world's past production of oil has come from the United States, and gasoline has always sold here at a much lower price than is paid by consumers in other countries. Yet the total oil resources of other countries probably exceed those of the United States. If foreign exploration had been as energetic as exploration within the United States, gasoline would undoubtedly be cheaper and more plentiful abroad.

It is perfectly safe to predict that many large new oil fields will be discovered in the United States in the future. Our average discovery rate over the last decade has been a little more than 1,000,000,000 bbls. per year. In order to maintain our proven reserves intact, we must continue to find at about this same rate over the next decade.

At some time in the future, whether it be remote or proximate, oil finding in the United States will begin to lag seriously behind consumption. When that time comes the American manufacturer of liquid fuels and lubricants will begin to supplement the supply of raw material he has previously obtained from the oil producer in the United States with an increasing proportion of imported crude, provided oil for import be then available. Whenever the required supply is no longer to be obtained at reasonable prices from domestic production plus imports, the manufacturer will turn to substitute raw materials. Coal is the most likely substitute, and fortunately the reserves of coal within the United States are ample for our needs over as long a period as we should attempt now to plan. The change to coal as a substitute for oil will not be a sudden, disrupting change. It will take place gradually and it will take place before prices of products advance far enough to give the consumer serious concern. Nevertheless, gasoline from coal will cost more than gasoline from crude oil, and this circumstance, together with the disadvantage to the United States which would arise if it were forced to the use of substitutes at a time when the rest of the world still had ample reserves of crude oil, constitute the basis upon which the plea for conservation of crude oil reserves rests.

Phillips Forms Company to Handle the New Polymerization Process

The polymerization method of making premium-grade gasoline from refinery and natural gases assumed a larger place with the announcement Monday of this week by Frank Phillips, president, that Phillips Petroleum Co. had organized the Polymerization Process Corp., through which patent licenses for use of the process would be available to the petroleum and natural gas industries.

Texas Corp., Standard Oil Co. (Indiana) and Standard Oil Co. (New Jersey) have an interest in the new organization through exchange of patents and will use the process, Mr. Phillips said.

T. B. Hudson, of the Phillips Petroleum Co., is president of the new corporation, and M. W. Kellogg Co. has been appointed licensing agent, to make estimates and bids on complete plants for utilization of the polymerization process.

Phillips Pioneer in New Process

Besides being the largest producer of natural gasoline in the country and a major factor in other phases of oil operations the Phillips organization has been a pioneer in the development of polymerization as applied to refinery and natural gases. It was announced recently that the company had been manufacturing motor fuel of high octane and volatility rating on a large scale basis for over a year. It is understood that this operation has been carried on at the company's Borger refinery located in the Texas Panhandle, where the company has large crude production, natural gas and natural gasoline interests. The company has carried on research and development work at this point for several years.

It is understood that all the companies associated in the new corporation and several other major refinery operators expect to complete plans soon for the installation of polymerization units at one or more of their refineries. Probably one of the first major installations will be at the Texas City, Tex., refinery of the Pan American Refining Corp., a subsidiary of the Standard of Indiana. The company last year completed the construction of a modern refinery at Texas City with a crude oil capacity of 30,000 bbls. daily and in addition to the polymerization unit now has plans for doubling the present crude capacity of the plant.

Phillips Petroleum Co. for years has been a large producer of natural gas and liquefied products derived from it, such as gasoline and liquefied gas; but the polymerization process is radically different in that a chemical change takes place instead of merely a physical separation. The company has been operating the process on a commercial scale.

The polymerization process has been described as the opposite of cracking in its application to petroleum refining. Cracking involves the destructive distillation of the heavy petroleum fractions in order to obtain materials which have a lower boiling range suitable for use as motor fuels. Polymerization, on the other hand, operates with hydrocarbons which are gases under atmospheric conditions, and it joins these materials of low molecular weight into heavier products having the distillation properties of gasoline.

Thus in order to supply the demand for motor fuel in the future the refiner proposes not only to decompose the heavy fractions of petroleum, but in effect to "recompose" the light gas fractions into products having the same general specifications. In this way refinery gases hitherto largely used as plant fuel are expected to become a major source of motor fuel supply of high octane rating.

The significance of the entrance of polymerization into the refinery program was indicated by facts presented at the annual meeting of the American Chemical Society in New York last April. It was pointed out at that time that the production of gas from cracking operations in the United States totaled 300,000,000,000 feet annually. It was stated that with the known developments in polymerizing the olefin hydrocarbons in this gas up to that time would be possible to produce 1,000,000,000 gallons of gasoline yearly, more than 5 per cent of the total motor fuel production in the country.

It was said that through the cracking or pyrolysis of paraffin hydrocarbons to form olefins and the polymerization of these olefins natural and refinery gases, except methane, theoretically could provide a motor fuel supply equal to the present production of cracked gasoline. The production of cracked gasoline is estimated at 500,000 bbls. daily, or more than 40 per cent of the country's total supply.

FRANK PHILLIPS

Marked advances in polymerization are predicted. Petroleum chemists say that polymerization of refinery gases for production of motor fuel occupies much the same place that the liquid-phase cracking did a quarter-century ago. In that case the simplest forms of commercial application followed accumulation of basic chemical data, with the manufacturing phase making swift progress when the problem became largely one of perfecting mechanical appliances.

Principal Factors in Polymerization

The principal factors in polymerization of gases, as in the case of cracking, are heat, pressure and time, with results also directly dependent on the percentage of unsaturated hydrocarbons in the gases. Polymerization of hydrocarbon gases in the production of certain chemicals has been carried on commercially for some time. In this field low costs are not a major consideration. The demand for these chemicals is so limited that they can provide only a minor outlet for the gases available. When technologists turned their attention to motor fuel production they at once were confronted by the important problem of figuring costs on a basis comparable with those in the distillation of crude petroleum and the extraction of gasoline from wet gas by absorption or compression.

Much headway in the solution of this and associated problems has been made, as is indicated by the announcement of Mr. Phillips.

Storage of Gas in Bow Island Reaches 7,500,000,000 Feet

CHATHAM, Ontario, Aug. 31.—Storage of waste gas from the Turner Valley Field in the depleted sands of the Bow Island Field has reached a point where a reserve of approximately 7,500,000,000 feet has been built up. The repressuring plant recently resumed operations after a brief shut down to check over the machinery and make needed repairs. Approximately 4,000,000 feet of gas is being stored daily. The Bow Island Field is being held as a reserve, the company's entire distributing system being supplied from Turner Valley. The Bow Island reserve was last drawn upon some years ago when the Royalite Oil Co. scrubbing plant in the Turner Valley Field was temporarily out of commission owing to a fire.

Stanolind Extends Purchases

Where formerly the Yount Lee Oil Co. posted prices for Texas and South Louisiana crude oil, the Stanolind Oil & Gas Co. effective August 1, takes the place of the Yount Lee company as a buyer, posting the same prices that have prevailed in the various fields affected, including Spindletop and High Island, where the scale runs from 82 cents to $1.12 per barrel; East Texas posted at $1; Welsh, La., 86 cents; Hackberry (Cameron Parish), Louisiana, where the prices range from 82 cents up to $1.12, and Evangeline, La., Field, where a price of 97 cents per barrel prevails. All prices are based on the use of a 99 per cent tank table. The Stanolind Oil & Gas Co. is also and has been for some time, a purchaser in other South Texas pools. The Stanolind Oil & Gas Co. recently purchased all the properties of the Yount Lee company.

OBITUARY

GUY SCOULER, vice president of the Union Petroleum Co., at the time that company was absorbed by the Sinclair Refining Co., and retired since then, died recently at his home in Philadelphia. Mr. Scouler enjoyed an especially wide acquaintanceship among refiners and marketers throughout the country.

W. W. VENSEL, of Pittsburgh, Pa., aged 70 years, died on Thursday, August 29, in a Cleveland, Ohio, hospital. Mr. Vensel was president of the Harland Oil Co., which company purchased the properties of the Manhattan Oil Co. following the death of the latter company's president, David Kelly. Mr. Vensel also had considerable financial interests in the East.

P. J. OLIVER, brother of H. H. Oliver, of the Gypsy Oil Co., Tulsa, died recently at Tampico, Mexico, where he was purchasing agent for the Mexican Gulf Oil Co. He was born at Parkersburg, W. Va., and lived there until he went to Mexico.

Oil Development in Rocky Mountains Hindered by Federal Stipulations

By ANDREW M. ROWLEY

Petroleum development work in the Rocky Mountain states of New Mexico, Colorado, Wyoming, Montana and Utah is handicapped seriously by difficulties involved in trying to carry out the desires and regulations of the federal Government before permits become leases, and properties can be developed after discoveries are made. The new leasing act, passed by Congress and signed August 21 by the President, is a step in the right direction towards correction of existing evils which are holding back operations in the states named. This act is expected to eventually remedy the situation, which has been very difficult, but co-operation of all interests involved in the working out of a practical unitization plan which is acceptable to all operators and property owners is necessary now to permit the development of the vast acreage involved in the five states, especially where discoveries have been made.

Prior to the passage and signing of the leasing act, permits were issued by the federal Government for exploratory work on federal lands. Exploratory work in the five states named is practically impossible without encountering blocks of federal land, and there is hardly an oil pool in this area which does not contain federal lands either in the proven pool or on structure of that pool. The accompanying plat, selected at random, shows the extent of the comingling of federal lands with fee land and state land.

This fact makes it necessary in all exploratory work to deal with the federal Government, and, in such dealings, to abide by rules and regulations issued by the federal Government or bureau in charge of that work.

Permits Extended to December 31, 1937

This condition on existing permits has not been changed by the new leasing act. All permits have been extended to December 31, 1937, and these permits now cover much of the most promising prospective acreage in New Mexico, a large part of such acreage in Colorado, and, to some extent, in Montana and Wyoming. Consequently, development work on the vast acreage involved in these states is dependent upon the working out of a practical plan in which stipulations of the federal Government can be made acceptable to property owners.

Permits are grants of permission to the permittee to explore for oil or gas. The practice has been general that permits were granted to individuals who in turn dealt with oil companies transferring same to these latter, usually with provision for an overriding royalty of 7½ per cent on A acreage and, occasionally, 2½ per cent on B acreage.

The acreage of each permit of the federal Government is divided 25 per cent into A acreage and 75 per cent into B acreage, with a royalty of 5 per cent to the Government on A acreage and from 12½ to 33⅓ per cent on B acreage, depending on the size of the well producing and the gravity of the oil. Consequently, operators of properties pay these royalties in addition to the override carried by the individual originally getting the permit, and who turned this permit over to the exploratory company.

Difficulties After a Discovery

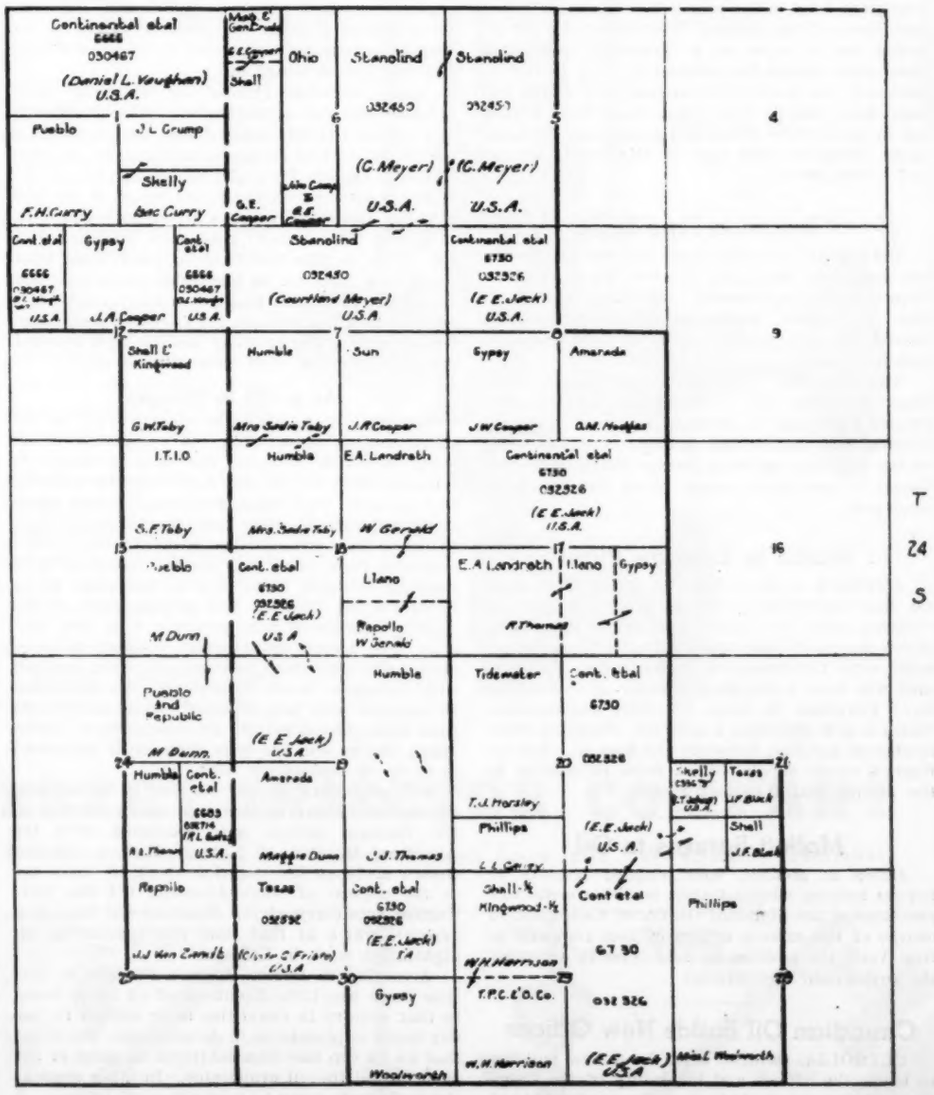
A company may expend large sums of money in exploring for oil or gas on prospective structures. When such a structure is found, a well is drilled. If that well is a producer, then the difficulties really start. In the first place, a permit is not a lease; and the company spending money for exploratory work or drilling the discovery well does not have any equity in the property and does not have a lease on the acreage. The company, furthermore, cannot produce this discovery well unless it is offset by a well on state or fee acreage, or drill any additional wells until all stipulations of the federal Government are carried out, and, until these stipulations are carried out, the company does not get a lease on the property.

The great difficulty is the stipluation that acreage in the pool must be unitized along lines set out by the federal Government. There is no objection to unitization on the part of operators. A majority of them favor unit operation, but it is almost impossible to get property owners in the area affected by the discovery to sign up on the unitization plan stipulated by the federal Government. In other words, the great trouble now is to get a practical unitization plan which would be acceptable both to the federal Government and to fee and state land owners.

As it is practically impossible to find a structure in the five states without involving federal acreage, and no drilling after a discovery is made can be done on federal acreage until a unitization plan approved by the Government is promulgated, and operators on fee and state land will not accept federal unitization stipulations, it is easy to visualize the problem confronting oil men and companies trying to develop lands in these five states.

Federal Stipulations

Among federal stipulations are "That upon completion of a producing well within the unit area subject to agreement to the satisfaction of the federal oil and gas supervisor, the operator shall submit for the approval of said supervisor a plan for further development of the unit area, which plan shall include an adequate and effective well-casing and well-spacing program, shall provide for complete exploration of the unit area under agreement and for the determination of the productive area thereof in each and every producing sand or horizon, shall afford protection to the interests of the second parties and of the United States against operations not under this agreement, and shall specify the number of wells pro-



Showing co-mingling of federal and other lands in a part of Lea County, New Mexico

posed to be drilled to production during each calendar year."

After completion of a discovery well the operator must submit to the federal Government, for approval, a schedule of lands including all lands within the unit area subject to agreement then conservatively regarded as proved or to be commercially productive of oil or gas, all lands in said schedule on approval of the Government to constitute the "participating area."

Operators claim it is impossible to outline an "adequate and effective" well-casing program immediately after completion of a discovery well, or to determine at that time the productive area.

Therefore, under these stipulations, a company making a discovery cannot produce its well until an acceptable plan of unitization is adopted by those in the area involved, or get any more drilling permits until such a unit plan is accepted. And it cannot get a lease on the property where it spent its money and made the discovery until such a unit plan is accepted by the federal Government and approved by those in the area affected.

Few Favor Plan

An example of difficulties encountered in getting approval of unitization plans outlined along stipulations of the federal Government, in more than 25 plans of unitization drafted and submitted to over 500 participants, favorable replies were received from only two of nearly 200 fee owners of acreage in the area involved, and not one favorable reply from anyone owning state acreage.

There was no opposition to the principle of unitization, but the trouble is and has been of drafting a plan incorporating stipulations of the federal Government which property owners would agree to. The great need is for property owners and representatives of the federal Government to get together and to agree on a "practical" unitization plan which would be satisfactory both to the interests of the federal Government and to fee and state land owners. Such plans have been worked out in many other states and such plans are being made effective right now in Oklahoma, Kansas and elsewhere.

Canadian Pipe Lines

CHATHAM, Ontario, Aug. 31.—Union Gas Co. has completed the laying of about 20 miles of its 10-inch main transmission line from the Dawn Field to London, where natural gas will be delivered this fall. About 7 miles of field line have also been laid.

The Canadian Western Natural Gas, Light, Heat & Power Co. is spending approximately $75,000 this year on reconditioning of its transmission and distributing systems. Reconditioning of the pipe line between Turner Valley and Bow Island is now in progress, about 50 men being employed.

Malco to Enlarge Plant

ARTESIA, N. Mex., Sept. 2.—Ralph M. Parsons Co. has contracted to design and build a Dubbs cracking unit for Malco Refineries, Inc., here. Malco previously had signed a Dubbs license agreement with Universal Oil Products Co. The new unit will have a charging capacity of 700 bbls. a day. Provision is made for later enlargement. Malco is now operating a 1,500-bbl. skimming plant producing gasoline, kerosene and fuel oil. The refinery's crude supply comes from production in the Artesia and Maljamar Fields.

Moffett Returns to Oil

James A. Moffett, who resigned recently as federal housing administrator, has been made vice president of the Standard Oil Co. of California, in charge of the eastern offices of that company in New York, the position he held prior to accepting the government appointment.

Canadian Oil Builds New Offices

PETROLIA, Ontario, Sept. 2.—A new building to house the offices and laboratory of the Canadian Oil Companies, Ltd., is under construction at the refinery plant here, and will be ready for occupation in October.

Ethiopian Oil Concession Abandoned After Flurry Among Governments

By C. O. WILLSON

NEW YORK.—International political and oil circles were astounded last week by reports of the granting of a large oil concession in Ethiopia by Emperor Haile Selassie. The grant was obtained by the African Development & Exploration Corp., incorporated under the laws of Delaware July 11 by Alfred W. Britton, Edward S. Williams and Vincent W. Westrup, all of whom have offices in the financial district of New York.

Francis M. Rickett, who is credited with arranging for the concession, is an Englishman who has been a frequent visitor to this country and has friends in oil and financial circles. He is credited with having played an important part in the granting of an oil concession in Iraq by the government to the British Oil Development Co., Ltd. This concession consists of 46,000 square miles in Iraq lying west of the Tigris River. The concession has a small crude oil production with other development work under way. It has been frequently reported this company would build a pipe line to the coast to provide an outlet for the crude. It is now understood the controlling interest in the company rests with Mosul Oil Fields, Ltd., organized in 1932. It has also been commonly reported the Italian government has a substantial interest in the latter company and has aided in furnishing funds so the exploratory work could be continued, reflecting the desire of Premier Mussolini to secure an important oil reserve comparable to those of France and the United Kingdom.

The concession granted by Emperor Haile Selassie includes approximately half of Ethiopia and covers 150,000 square miles. By its terms it grants the African Development company exclusive rights to explore for and produce oil and gas for 75 years after which the rights revert to the government. Geological surveys are to be begun within a year. The company must start drilling within five years. A pipe line is to be constructed when production justifies. If the order for a pipe line is not placed within four years after access to a suitable port is available, the company shall abandon all rights. The company has the right to abandon the enterprise with three months' notice.

As to Oil in Ethiopia

Incidentally, geologists here are inclined to discount another report that the probability of oil being found in Ethiopia has been a factor in bringing about the present difficulties between the two countries with the assumption it might result in participation by other countries always anxious to add to their own oil reserves or to prevent other countries from doing so. Known geological data covering Ethiopia, it is said, do not point to an important oil reserve. The greater part of the country consists of high plateaus with deep caverns. The known substructure consists of basement rocks with thin limestone and shale, overlain with immense basalt formations. No important oil seepages have been reported. Large concessions have been offered private oil companies in recent years, but no one has been sufficiently interested to carry on exploratory work.

Oil geologists appear to be in substantial agreement with an opinion expressed yesterday by Dr. Barnum Brown, now connected with the American Museum of Natural History. Doctor Brown made an investigation about 10 years ago at the request of Anglo-American Oil Co., Ltd., English subsidiary of the Standard Oil Co. (New Jersey), which at that time was considering oil exploration work in Ethiopia.

According to Doctor Brown's findings at that time there was little likelihood of oil being found in that country in quantities large enough to justify major expenditures in development. He found that an oil cap has been shattered in parts of the country and the oil evaporated. In other sections the rocks lack a cap to hold either oil or gas.

"The major part of these deposits is of marine origin," Doctor Brown said, "and unless you have alternating limestone, sandstone and shale, there is no possibility of oil or gas remaining in the ground. The cover is lacking wherever I examined."

Following publication of the terms of the concession, the British government instructed its minister to Ethiopia to notify the emperor that the concession should be canceled because of the possibility of its embroiling Great Britain with Italy.

Subsequently, Secretary of State Hull at Washington issued a statement containing an agreement by officials of the Standard-Vacuum Oil Co. to abandon the concession obtained through the African subsidiary.

"The officials of the company were informed," Secretary Hull continued, "that the granting of this concession had been the cause of great embarrassment not only to this Government but to other governments who are making strenuous and sincere efforts for the preservation of peace.

"In the circumstances, the company officials were informed of the views of this Government that it was highly desirable that the necessary steps should be taken at the earliest possible moment to terminate the present concession.

"The Secretary of State was later informed by the officials of the company that the company has decided to withdraw from the concession and is notifying the emperor to that effect."

Statement by Company

George S. Walden, chairman of the Standard-Vacuum company, in a statement said:

"On Friday last, I was informed an agreement had been signed with the kingdom of Ethiopia, though I have not seen a copy of it as executed. The agreement which Mr. Rickett was authorized to negotiate relates to the development of crude petroleum production and provides for no payment or loan of money, nor has any been made.

"This matter was handled in the regular course of business as a private transaction with Ethiopia, but without consultation with any other government.

"In view of the misleading nature of the news comments, I felt it necessary to give all the facts to our State Department before issuing any public statement. Today I have done this, and after conference with the Secretary of State, have decided to advise the Ethiopian government of our intention to abandon the concession."

Wellsville, N. Y., Rate Reduced

WELLSVILLE, N. Y., Sept. 2.—The Empire Gas & Fuel Co., Ltd., of this city announced that they filed with the Public Service Commission at Albany a new schedule of rates that will tend to reduce the gas rates of consumers in that territory. No change will be made in the present charge of 70 cents a thousand for the first 3,000 feet of gas used, but for consumption over that figure there will be reductions of 5 cents a thousand. Discount rates and minimum charges will remain unchanged under the new schedule.

Anglin Compact Representative

Gov. E. W. Marland of Oklahoma has named Tom Anglin, former speaker of the Oklahoma house of representatives and opponent of Mr. Marland for governor at the last election, as assistant state representative for the interstate oil compact. The meeting of state representatives will be held at Oklahoma City September 12.

Wainwright Gas Franchise

WAINWRIGHT, Alberta, Aug. 31.—The Wainwright municipal council has approved a year's renewal of the agreement under which the Wainwright Gas Co. furnishes natural gas to the community.

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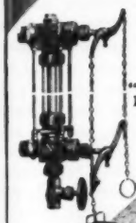
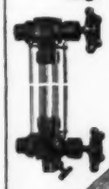

"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

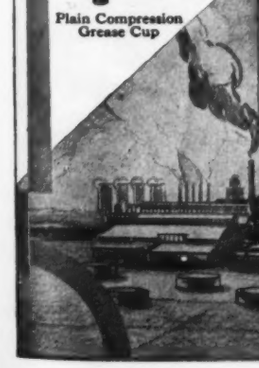

"All-Iron" Automatic Liquid Level Gage

Gas Engine Lubricator

Snap Lever Oiler

Plain Brass Oil Cup

Plain Compression Grease Cup



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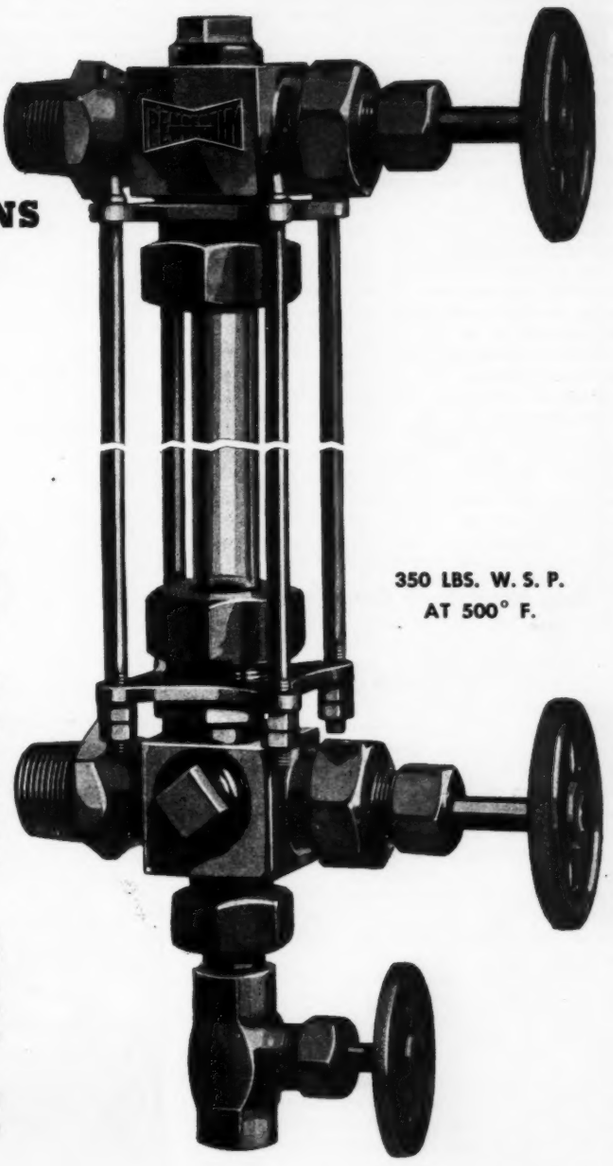
Ball type safety valves are located in each gage arm to automatically and positively close when the glass is broken. Ball in lower valve must be lifted to seat and cannot close unless glass breaks; this absolutely prevents a false water level from being shown. The shut-off valves are arranged for easy regrinding. Packing glands prevent any torsional stress on glass when packing nuts are drawn down.

The gage arms are self-cleaning. The glass is offset from stems for cleaning from either end without loosening glass packing or valves. A separate drain valve, union nut and tail are furnished; valve can be connected directly to gage or placed wherever most convenient.

The "Navy Type", like other Penberthy water and liquid level gages, is carried in stock by supply houses everywhere.



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Oil Men Welcome Opportunity Given by Journal Special Train to A.P.I.

Announcement that The Oil and Gas Journal had arranged with the Santa Fe Railroad for a special train to the annual convention of the American Petroleum Institute in Los Angeles in November solved the transportation problem of many oil men and their wives who will attend the meeting. The opportunity to travel with people they know or with whom they desire to become better acquainted, offered by a special train, eliminated the one bad feature of the journey to California—a long trip without the companionship of friends or persons who talk the same language.

Combined with this advantage is the fact the route of the Santa Fe is the shortest from Chicago to Los Angeles and that The Chief, crack train of which The Oil and Gas Journal Special will be a section, is the fastest train between these points. Any attempt to describe the scenery along this route would be as difficult as to picture in words the Grand Canyon. The territory is a veritable wonderland unequalled throughout the world for beauty. From the time the rolling prairies give way to the grandeur of the Rockies, the scenes change rapidly. The Indian villages and Spanish architecture predominating in New Mexico will impress those who have never visited that state. The giant cactuses of Arizona are a never-to-be-forgotten sight, while the desert, east of the mountains in California, is an awe-inspiring spectacle.

From Mountains to Orange Groves

But probably the greatest thrill will come towards the close of the trip as the train starts down the western slope of the majestic Sierras and winds its way through the orange groves. Beautiful estates similar to those shown in the accompanying picture dot the landscape as the train finally reaches its destination at Los Angeles.

The schedule of The Oil and Gas Journal Special is such that the trip across a part of Colorado and New Mexico and the latter part of the journey through California will be made during daylight, permitting good views of the scenery in these states

Oil men are attracted especially by the opportunity provided by the special train to be with those in the industry from other areas. The passenger list will include executives and others in the business from New York and other eastern points, those from Chicago and the Central West, the contingent from the Mid-Continent, and those going from the Rocky Mountain area.

The special will start in New York as a part of the Twentieth Century Limited over the New York Central Lines and then will become a section of The Chief over the Santa Fe from Chicago. Cars from Tulsa and other Mid-Continent points will be picked up and become a part of the special at Kansas City.

Chance to Be With Associates

Groups of oil men are arranging for reservations on the special so that they might benefit from the contacts with men from other sections and from discussions of conditions in different areas. For instance a number of men in the Mid-Continent who do business with companies in the Chicago and eastern areas will go to the convention on the special as it will permit them to be with these men on the trip. Eastern officials will be enabled to meet Chicago, Mid-Continent and Rocky Mountain business associates.

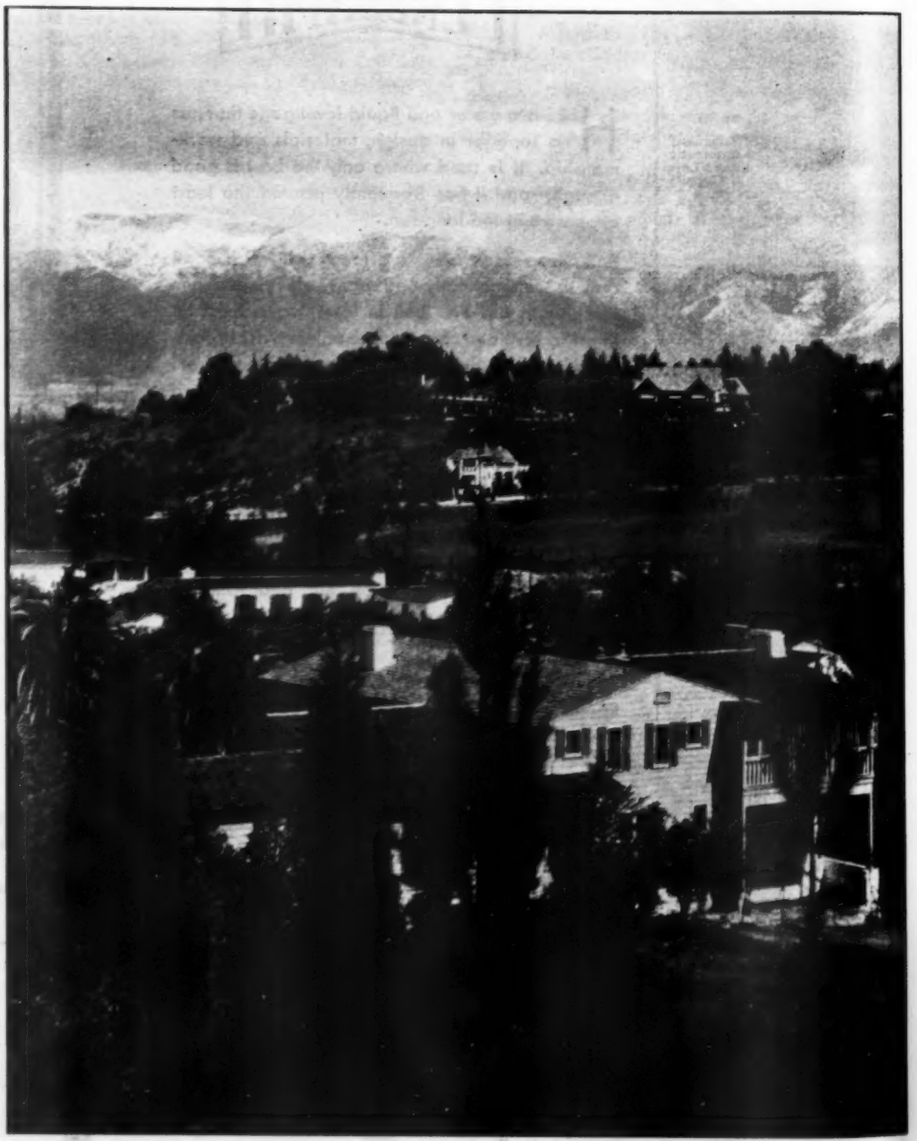
The schedule of the special reduces to a minimum the time out of the business week necessary to make the trip. Those starting from New York will leave that city, on the Twentieth Century Limited, at 4 o'clock Thursday afternoon, November 7, arriving in Chicago at 8 a.m. November 8. The special will leave Chicago at 12:30 p.m. on Friday, November 8, arriving at Kansas City at 10:45 o'clock on the evening of that day.

A train over the Santa Fe will leave Tulsa at 12:30 p.m. on Friday, November 8, and these cars will be made part of the special at Kansas City. Stops by the special will be made at Newton, Kans.; La Junta, Colo., and Albuquerque, N. Mex., and the train will reach Los Angeles at 4 o'clock on Sunday afternoon, November 10.

Those making reservations on the special may make the return trip either by the Santa Fe Railroad or by any other route they desire. The return limit for the tourist rate has been extended to November 30 and these tickets include transportation to San Diego, without extra charge. This will permit those who wish to attend the Pacific International Exposition being held at San Diego to go there.

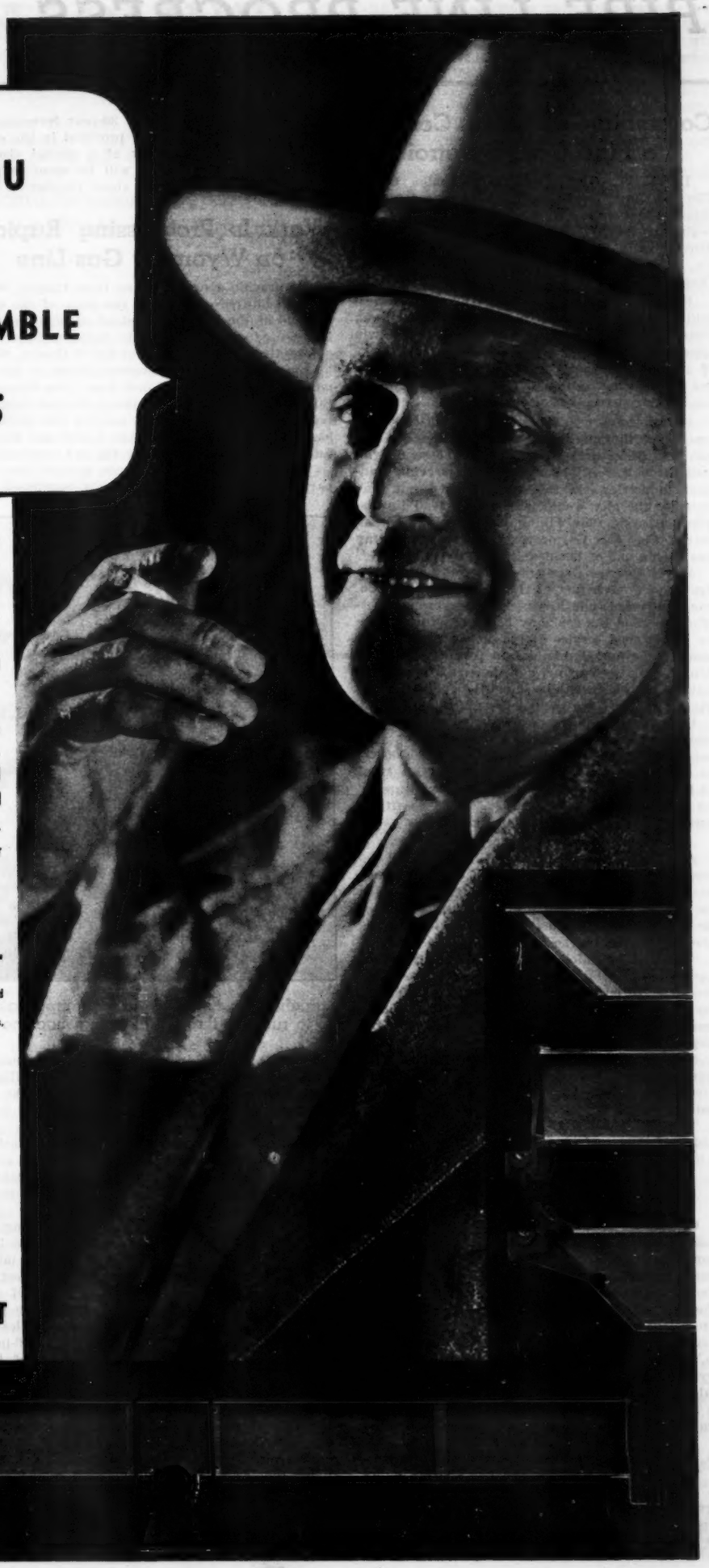
Indications are a greater number of women will make the trip to the convention this year than usual. Many oil men have promised their wives and families "they can go along this year" and the wives and families already are planning for the big event. Facilities for bridge and other entertainment for the ladies will be provided on The Oil and Gas Journal Special and every arrangement will be made to see that there is not one dull moment on the entire trip for anyone on the train.

Various associations whose members usually attend the A.P.I. conventions are contacting these members with the view of having as many as possible go on this special, both because it will be more pleasant for all to be together and also as the trip will give an opportunity to discuss association matters with members from various sections of the country. For example, Walter Ferguson, executive vice president of the Mid-Continent Oil and Gas Association, which has 900 members, is enthusiastic about the special and the service it will provide for members of his association who will go to Los Angeles.



View of the Pasadena Estates with the Sierra Madres in the background

I'LL MATCH YOU FOR TEN— BUT I WON'T GAMBLE ON *Beams*



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DERRICKS · PUMPING EQUIPMENT

PIPE LINE PROGRESS

Columbia Gas Closes Contract to Pipe Gas to Detroit

DETROIT, Mich., Sept. 2.—Columbia Gas & Electric Corp. has signed a 15-year contract to supply the Detroit City Gas Co. with natural gas beginning July 1, 1936. The contract was made directly with the Panhandle Eastern Pipe Line Co., 50 per cent owned by Columbia Oil & Gasoline Corp.

Signing of a contract by the privately owned utility will probably avert efforts of Mayor Frank Couzens and the Detroit city administration to win approval of the voters at the October 8 primary of a proposition permitting the city to operate a gas distributing system of its own and to issue bonds for construction of such a system.

It was the city administration's plan to sign a contract with Panhandle-Eastern Pipeline Co. for purchase of natural gas which would be distributed through a city-owned belt line serving principal industries. If this plan worked out successfully the city would gradually extend its distribution system by taking over portions of the Detroit City Gas Co. property until the company was driven out of business.

Mayor Couzens was out of the city when the signing of the contract by the Detroit City Gas Co. was announced, but his associates expressed satisfaction. The gas company has a reputation here for giving good service at reasonable rates; there seems to be but slight demand for public ownership of the gas company, and there is a possibility that the propositions to be submitted at the October primary would have been defeated.

Project will require the construction of a 300-mile pipe line from Muncie, Ind., to Detroit at a cost of $9,000,000, expenditure of another $9,000,000 for strengthening the present pipe line from Muncie to the Texas gas fields and the expenditure by the Detroit City Gas Co. of $2,500,000 to fit its distribution facilities for natural gas.

AUSTIN, Tex., Sept. 2.—Governor Allred replied sharply to Secretary Ickes' criticism that delays by Texas officials in filing an application for W.P.A. funds would prevent consideration of the proposed $46,000,000 Panhandle to Detroit gas pipe line project by the State.

"I recall his (Ickes) sending a telegram to opponents of the bill during the legislative session," Governor Allred said. "In my judgment, the bill (to create a state agency to handle the project) would have passed if it had not been for the telegram."

Secretary Ickes indicated he might not do more than "receive" the application because of the lateness in filing. He noted President Roosevelt had set September 12 as a deadline.

"They've had plenty of time down there," Ickes said. "If they just send the application in to get it under the deadline, we just can't do it."

New Michigan Lines

CRYSTAL, Mich., Sept. 2.—Immediate construction of a new 20-mile line of 4-inch welded pipe from the Crystal Township, Montcalm County Field, to the McClanahan refinery at St. Louis, Mich., was announced by Walter L. McClanahan. The line will be laid by a newly organized separate company, the McClanahan Pipe Line Co., with a central pumping station on the McClanahan Oil Co.'s Harry and Geneva Flint lease, in Section 11, Crystal Township, in the heart of the new Central Michigan Field.

The McClanahan line will be the fourth system from the new field, the others being operated by Pure Transportation Co., Emrail Pipe Line Co., and Midwestern Pipe Line Co.

The Muskegon Gas Co. also has started laying an 8-mile extension of its distribution system to serve the city of North Muskegon in addition to Muskegon and Muskegon Heights with gas from the Austin Township, Mecosta County Pool. North Muskegon voters approved a 30-year franchise for the same rates and service provided in the other cities by a large majority at a special election last week. About $30,000 will be spent to complete the extension on or about October 1.

Work Is Progressing Rapidly on Wyoming Gas Line

To provide a new gas line from Casper, Wyo., to Scottsbluff, Neb., to take the place of the western end of the former Stanolind oil pipe line now being used to transport gas between these two points, the North Central Gas Co. of Casper, Wyo., let contract to Williams Brothers, Tulsa, to lay 165 miles of 12, 10, 8 and 6-inch line. The Stanolind Pipe Line Co. has given notice it desires this line returned to it May 31, 1936, and for this reason it has been necessary to provide a new gas line to fulfill gas franchises held by the gas company.

The contract has really been divided into two parts. American Pipe & Metal Co. purchased 110

Straightening bend in old pipe preparatory to running through cleaning machine

miles of 10, 8 and 6-inch old pipe in lines running north and also west from Casper, Wyo. Williams Brothers have a contract from this firm to take up, transport and recondition this pipe, and they have nearly completed this portion of the contract.

A central pipe cleaning plant was established in Casper to handle this 110 miles of pipe, and some of it has been hauled over 100 miles to the cleaning plant. Old screw pipe has been beveled and made ready for welding into 80-foot lengths.

The second contract covers the cleaning of right of way, ditching, welding and laying the 165-mile line to Scottsbluff, Neb. For this line 65 miles of 12-inch new pipe has been ordered and most of it is now strung along the right of way. Of the 110-mile gas line the remainder of the pipe will come from the reconditioned pipe and 60 miles of 10-inch, 10 miles of 8-inch and 30 miles of 6-inch pipe will be used. This leaves 10 miles of the original 110 miles of pipe available for other pipe line.

All pipe on the Casper-Scottsbluff line will be electrically welded by Price & Co., Bartlesville, Okla., into 80-foot lengths and these lengths will then be joined together with couplings.

For this work hydraulic angledozers mounted upon caterpillar tractors are being used to make right of way, and four ditchers are at work, two opening the ditch to remove the old pipe north and west of Casper and the other two ditchers working along the right of way on the Scottsbluff line. For handling this material, 20 trucks are on the job hauling material into and out of the cleaning yards. Stationary cleaning machines have been installed in the Casper yard and another cleaning machine will be used along the pipe line to thoroughly clean the pipe before it is again put in the ground.

Williams Brothers have established headquarters at Casper, Douglas, Glendo and Gurnesey, Wyo., to handle this work, and the project is under the supervision of Guy S. Connors, vice president, with H. L. (Red) Davis acting as general superintendent. The line to Scottsbluff will be completed by December 1.

Proposal to Supply St. Louis Includes 70-Mile Line

A bill to give the McKnab Oil & Gas Co. a 20-year natural gas franchise in St. Louis, Mo., was approved recently by the board of public service which referred it to the special gas committee of the board of aldermen. The McKnab company, under the proposal, would furnish gas if the city subsequently purchased the company's equipment or acquired them by forfeiture. The franchise value is excluded as an element to be considered if the city purchases the system. The franchise would also provide compensation to the city for use of streets and stipulates heat content.

The McKnab company's headquarters are at Winfield, Kans. It plans to lay a 70-mile pipe line from Bowling Green, Mo., to St. Louis and 48 miles of pipe in the city. At Bowling Green the line would connect with the main line of the Panhandle-Eastern Pipe Line Co. Kelt Wilson, engineer for the McKnab company, said his organization would sell gas to the Laclede Gas Light Co. for distribution in St. Louis if the Laclede company would take the gas.

Resume Work on Valley Line

McALLEN, Tex., Sept. 2.—A temporary injunction restraining the Valley Pipe Line Co. from using the right of way on the road between Barreda and Port Isabel for laying a segment of line to the Samfordyce well was dissolved by order of Judge Bryce Ferguson in a hearing conducted at Brownsville. The ruling held that pipe lines, which are common carriers, have a right to use right of way along state highways subject to certain regulations of the State Highway Department and commissioners' courts.

Vermillion, S. D., Line Finished

Williams Brothers have about completed all of their contract to lay 12 miles of 6-inch diameter new gas pipe line between the trunk line of the Northern Natural Gas Co. at Sioux Falls, S. D., and Vermillion, S. D., and to lay the town's service system of 2, 3, 4 and 6-inch lines.

Mexican Gas Line

The Compania Nacional de Gas, S.A., is reported to have obtained a concession from the Mexican government for the construction of a natural gas distributing system at Piedras Negras. The gas will be piped across the Rio Grande from Eagle Pass, Tex., which is connected by pipe line with the producing field 19 miles north of El Paso. Rio Grande border towns are now being supplied. It will be the second international gas pipe line entering Mexico, one being in operation from the gas fields near Laredo to Monterrey, 140 miles.

Gas Supply for Elgin, Tex.

HOUSTON, Tex., Sept. 2.—With the completion of the gas line extension of 4.7 miles from Butler Junction on the United Gas Co.'s system, natural gas was turned on in the town of Elgin, northern Bastrop County, Texas, the past week.

Illinois to Cross Wabash

Illinois Pipe Line Co., Findlay, Ohio, recently applied for a permit to place a 4-inch pipe line under the Wabash River about 25 miles south of Terre Haute, Ind. The line will cross from the Illinois to the Indiana side, near Heathsville, Ill.

NATURAL GASOLINE

California's Natural Gasoline Production Shows Increase

Natural gasoline production in California in July recorded an increase of 1,000 bbls. daily over that of June, according to the Bureau of Mines report, the July daily average being 32,000 bbls., compared with 31,000 bbls. in June. Refinery utilization fell off 4,000 bbls. daily to 32,000 bbls. Shipments registered an increase of 150 per cent, rising from 2,000 bbls. daily in June to 5,000 bbls. daily in July. Stocks decreased 9,000 bbls. daily and at the close of the month were 2,242,000 bbls. This is 377,000 bbls. less than the stocks recorded at the end of July, 1934. There were 89 plants in operation, with a daily capacity of 2,030,000 feet.

NATURAL GASOLINE PLANT OPERATIONS, JULY, 1935

Field—	Gas treated (M.C.F.)	Natural gasoline produced (gals.)
San Joaquin Valley:		
Elk Hills	75,706	146,654
Kettleman Hills	8,119,958	9,589,162
Midway-Sunset	1,243,198	2,581,088
Mountain View	912,636	777,065
Miscellaneous	412,687	662,662
Coastal Region:		
Elwood	204,826	504,877
Rincon	76,341	108,265
Santa Maria	135,646	363,440
Ventura Avenue	2,882,714	3,372,749
Miscellaneous	272,176	293,804
Los Angeles Basin:		
Coyote	445,502	748,508
Dominguez	833,8[illegible]0	1,479,056
Huntington Beach	2,176,957	3,569,834
Inglewood	185,806	291,477
Long Beach	2,312,048	7,272,741
Playa Del Rey	1,444,566	1,962,996
Richfield	407,241	717,466
Rosecrans	535,542	752,987
Santa Fe Springs	2,679,443	4,569,261
Seal Beach	445,373	576,424
Torrance	105,687	237,189
Miscellaneous	272,623	863,835
Total (all fields)	26,180,526	41,441,540

DISTRIBUTION (Gallons)

Stocks beginning of month	3,258,657	
Production during month	41,441,540	
Delivered to refineries		40,106,136
Delivered to jo bers, brokers or blenders		1,234,849
Blended at plants for production of motor fuel		7,786
Losses		126,572
Stocks end of month		3,224,854
Total	44,700,197	44,700,197

Liquefied petroleum gas production	1,409,513 gals. =	33,560 bbls.
Motor fuel produced	8,374 gals. =	199 bbls.

NATURAL GASOLINE INCLUDING LIQUEFIED PETROLEUM GAS

Supply—	Dly. av. bbls. July	Dly. av. bbls. June
Total production	32,912	32,077
Stock transfer (deliveries) receipts—net	(557)	(278)
Total	32,355	31,799
DEDUCT refinery requirements:		
Runs to stills	1,962	2,388
Blended	29,990	33,120
Total	31,952	35,508
ADD refinery output:		
Straightrun	.....	.....
Natural gasoline—net	244	198
Net current supply	647	3,511
Demand—		
Domestic demand including bunkers	1,632	1,484
Shipment to Alaska and Hawaii	13	14
Rail and truck shipments to U. S. points outside Pacific Coast territory	5	5
Demand in domestic market area	1,650	1,503
Shipments:		
Pacific foreign including canal zone	1,768	503
Atlantic foreign	3,570	1,567
Total market demand	6,988	3,573
Losses (gains) unaccounted for—net	2,948	2,252
Total current demand	3,936	5,825
Surplus or (deficit)	(9,289)	(9,336)

Carbon Plant at Sanford, Tex.

United Carbon Co., Charleston, W. Va., has a carbon black plant now under construction at Sanford, Tex., with a capacity of approximately 65,000 pounds a day. The plant will operate on Moore County gas when completed.

Manufacturers Keeping an Eye on Panhandle Litigation

Natural gasoline manufacturers are watching with interest the fortunes of the new gas conservation law in the Texas Panhandle, which has necessitated shutdown of large stripping units in that area and curtailed natural gasoline production approximately 50 cars daily. State officials foresee difficulties in enforcement of the statute, which already has been subjected to attack and is expected to be the center of further litigation. It is believed improbable that this law will have to drag its way through the courts for a prolonged period as did enactments dealing with proration and conservation. Some of the many cases growing out of oil proration, it will be recalled, reached the Supreme Court of the United States, with resultant confusion until their outcome was known definitely. Experience gained in these cases will be of pronounced benefit in dealing with assaults directed at enforcement of the Panhandle conservation law.

Attacks on the State Railroad Commission's enforcement order began the day it became effective, August 1, when one operator obtained an injunction. The suit was withdrawn and the shutdown, temporarily suspended, was resumed. A three-judge Federal Court began sittings in Houston last Friday to pass on the constitutionality of the law, attacked in complaints filed by several operators in the field. Its findings are expected to be handed down promptly. Other actions are said to be in prospect.

The state attorney general's department has expressed confidence that the courts will sustain the law, which already restricts the use of sweet gas to light and fuel purposes; to chemical manufacturing other than making of carbon black; to extraction of natural gasoline, with the proviso that the residue shall not be popped into the air, and to actual repressuring work. The same restrictions will apply to sour gas after October 1. Outside the attorney general's office less assurance has been manifested by some interests concerning the outcome of litigation pending or prospective. The general feeling seems to be, however, that the law will be upheld.

NATURAL GAS NEWS

Ratable Taking Gas Cases Are Taken Under Advisement

HOUSTON, Tex., Sept. 2.—The cases of the Texas Panhandle Gas Co. seeking an injunction against the enforcement by the Railroad Commission of the new gas ratable taking law, the Henderson Gas Co. seeking relief from the new sour gas law, and the Tysco Oil Co. attacking the 16-acre spacing rules in the new South Houston Field, have been taken under advisement by the court following a hearing before a three-judge federal court here.

The Tysco case did not question the authority of the Railroad Commission or the South Houston city council to make reasonable rules and regulations covering drilling but charged the 16-acre spacing rule was arbitrary and unjust and that it was promulgated by and for the Stanolind Oil & Gas Co., which controls the bulk of the acreage.

Plaintiffs are seeking permits to drill on two small tracts in drilling units, in which, under the present spacing rules, Stanolind Oil & Gas Co. would control the development. They contended that one well to 3, 4 or 5 acres would not be dangerous and would result in a greater recovery.

In the Henderson Gas Co. case, plaintiffs attacked the new gas conservation laws and contested particularly that phase prohibiting the use of sweet gas in the manufacture of carbon black, and the Railroad Commission definition of what constitutes sweet or sour gas. They contended that 14 of Henderson Gas Co.'s wells in the Panhandle had been classified as "sour" and that because of this the output had been rejected by the pipe line companies, although the company had been prohibited from using the gas in carbon black manufacture. The plaintiffs are seeking permission to use all this gas in manufacture of carbon black.

The State contended the Railroad Commission was within its rights in making classifications of sour and sweet gas and requiring sweet gas to be used for lighting and fuel only. It presented affidavits to show seven of the plaintiff's wells were sour gas wells, more than adequate for requirements of carbon black manufacture, and that the use of the remaining gas would constitute waste.

The Texas Panhandle Gas Co. case attacked the constitutionality of the new state law providing for the ratable taking of natural gas. It was maintained the company did not create waste of reserves or dissipation of energy in the production of its own wells to fill its market requirements, and that if the company were compelled to buy gas ratably it would suffer injustice. Attorneys for the company contended the effect was to compel the company to surrender 80 per cent of its pipe line facilities and its market for its 12 wells to 65 other neighboring wells and spend $285,000 for gathering lines to connect them.

The court stated the restraining order granted the company by Judge McMillan against the enforcement of the ratable taking law would continue in effect pending the decision. A full hearing could be had if desired some time in October.

Houston Gathering System

HOUSTON, Tex., Sept. 2.—The Humble Oil & Refining Co. will soon start the construction of natural gas gathering systems in a number of fields within a radius of 50 miles of Houston, and the construction of a pipe line for the purpose of supplying industries here with fuel, officials of the company have announced.

The company plans to supply its gas from the Pledger Field to the plant of the Texas Gulf Sulphur Co. at Boling, 10 miles distant, under the 10-year contract which it concluded with that company on June 1, service to begin on January 1, 1936.

To Cancel Kansas Franchises

The Kansas Pipe Line & Gas Co., Salina, Kans., has filed application with the Kansas Corporation Commission to withdraw as natural gas distributor in 17 Kansas communities due to expiration of pipe line leases with the Stanolind Pipe Line Co. May 30, 1936, from which the utility received its gas supply. Permission was asked to transfer the franchises at Westmoreland, Wheaton, Linn, Greenleaf, Barnes, Haddam, and Morrowville to Kansas Power & Light Co. The Kansas Pipe Line & Gas Co. also asked permission to transfer its franchises at Lecompton, Oskaloosa, Perry and Valley Falls to Union Public Service Co. Distribution systems at Hoyt, Delia, Emmett, Mahaska, Narka and Blaine would be abandoned.

Since it is withdrawing from business in Kansas, the company asked its license as pipe line and common carrier be cancelled by the state.

NEWS FROM FOREIGN LANDS

Germany

Reporting upon progress made by Imperial Chemical Industries, Ltd., in producing motor fuel from coal, the British Secretary for Mines stated on July 30 that since February 7, the date production began at the Billingham plant, a total of 7,500,000 gallons of petrol had been manufactured and that four-fifths had already been marketed. according to a report from Assistant Trade Commissioner W. S. Lockwood, London, made public by the Commerce Department's chemical division. Deliveries of the finished petrol to distribution outlets began on April 9, the report stated.

The secretary for mines stated that contracts have been arranged by Imperial Chemical Industries for the purchase of creosote oil and low temperature tar oils as raw materials for hydrogenation at prices which should materially benefit the British coal industry. The total quantity of these materials contracted for has been based on a program of making 100,000 tons of petrol from coal and 50,000 tons from tar products.

A train load of 34 tanks, each containing 3,000 gallons of oil made from coal by low temperature carbonization was shipped to the Billingham plant on April 26 from the Barugh Low Temperature Carbonization Works to Yorkshire. This is said to be the first time that a bulk shipment of oil obtained by the low temperature carbonization process has been treated by a hydrogenation plant in Great Britain.

The Billingham plant is the outcome of a decision by the British government late in 1933 to grant a substantial preference for domestically produced light oils to enable Imperial Chemical Industries to proceed with the commercial development of the hydrogenation process on a large scale.

Dutch West Indies

The modernization and enlargement program for the refinery of Curacaosche Petroleum Industrie Maatschappij (Shell), located on Curacao Island, Dutch West Indies, off the coast of Venezuela, is rapidly taking shape, according to a consular report. A new reforming unit is being installed and two cracking units are about completed.

The company recently has added two shallow draft oil tankers suitable for the Gulf of Maracaibo trade which are to be added to its fleet of 32 tankers employed in bringing oil from Venezuela to Curacao. New houses are being erected for the refinery personnel. The refinery has a capacity of approximately 160,000 bbls. daily.

The Arend Petroleum Maatschappij (Shell), on the nearby Aruba Island, is also erecting a high-pressure distillation equipment. This unit is designed to reform naphthas and also crack overhead gas oils.

France

The new refinery of Compagnie Francaise De Raffinage, located at L'Etang de Berre on the Mediterranean near Marseilles, France, will be operating on capacity basis early next month. The refinery, which has a rated crude oil capacity of 600,000 tons yearly, or approximately 12,000 bbls. daily, is the latest of the French refineries to start operating. The 15 French plants now operating are refining approximately 100,000 bbls. of crude oil daily with a rated capacity at least 25 per cent in excess of present operations.

The new refinery on the Mediterranean will be a complete light oil plant. Its distillation facilities include topping, reforming and cracking. The new plant was designed especially to operate with Iraq crude oil, which is readily available from the Tripoli terminal of the Iraq Petroleum Co., Ltd.

The Iraq crude contains considerable sulphur and special treating equipment has been installed to take care of this situation. The straight gasoline and naphtha cuts from the crude are relatively low in octane rating. The operation has been arranged so that the heavy gasoline fraction can be reformed to secure a higher octane rating on the total gasoline yield. The cracking facilities will operate with an overhead gas oil cut. In addition to gasoline, the principal products obtained in the refinery operation will be kerosene, distillate and residual fuel oil. The plant was under construction more than one year. The crude topping facilities have been in operation for several weeks.

The refinery is a companion plant to one owned by the same company located on the Tancarville Canal near Le Havre and known as "Raffinerie de Normandie." This plant has been in operation for more than two years and a year ago received the first tanker shipment of Iraq crude oil from the Tripoli terminal and has since been operating for the most part with that crude. It is a larger plant with a capacity in excess of 1,000,000 tons yearly. It is complete in its operations.

It is said that the two plants will be able to absorb practically all of the French share of the production of the Iraq Petroleum Co., Ltd., now amounting to approximately 85,000 bbls. daily based on the pipe line deliveries being made at the Haifa and Tripoli terminals. Controlling stock interest in the Compagnie Francaise de Raffinage, operator of the refineries, is owned by Compagnie Francaise Des Petroles. The latter company, in which the French government has a large interest, owns 23¾ per cent of the stock of the Iraq Petroleum Co., Ltd., which owns and operates the Kirkuk concession in Iraq and the pipe line system which delivers oil to the Mediterranean terminals.

Recent reports show that the French refineries are taking more than 60,000 bbls. daily of the Iraq crude. This has replaced crude which up to a year ago was all obtained from United States, South America, Iran and other countries. The bulk of this crude oil is going to refineries owned or controlled by Anglo-Iranian Oil Co., Ltd., the Shell interests and a fourth group of American companies of which the Standard Oil Co. of New Jersey is the most important. These interests with the French controlled company own 95 per cent of the stock of the Iraq Petroleum Co., Ltd.

U. S. S. R.

For the third successive year exports of crude and petroleum products from the U.S.S.R. are decreasing and it now appears certain that the total foreign shipments for 1935 will be lower than any year since 1928. Exports from the U.S.S.R. increased steadily from 1920 after the old fields had been rehabilitated under the Soviet management and new pools discovered. A peak in shipments was reached in 1932 when approximately 53,000,000 bbls. of crude oil and its products were exported of which approximately one-third was gasoline.

The decline started the following year and based on the record for the first six months of this year the 1935 total will be approximately 50 per cent of that of 1932. The exports for the first six months of 1935 and 1934 were as follows (data in barrels):

	1935	1934
Crude oil	66,600	732,500
Gasoline	2,559,800	4,621,000
Kerosene	1,494,900	1,496,000
Lubricating oil	829,400	855,900
Fuel and Diesel oils	4,755,000	4,938,900
Gas oil	1,657,500	2,224,500
Miscellaneous oils	127,800	178,000
Total	11,491,000	14,946,800

This decline of 3,455,000 bbls. amounts to approximately 23 per cent. The decline in crude oil exports so far this year is outstanding with a drop of more than 40 per cent in gasoline exports. Exports of lubricating oils show only a small decline compared with 1934 which was the peak year for the products that come under that general classification.

The decrease in exports at a time when the government of the U.S.S.R. is anxious to increase its foreign sales in order to strengthen its balance of trade position and provide funds to expand other phases of its industrial operations is explained as due to the failure of oil and refinery output to expand as planned under the second Five-Year Plan coupled with an increase in domestic requirements. It had been hoped at one time to have Russian crude oil production around 750,000 bbls. daily by 1935 but current production is around 445,000 bbls. daily. At the same time the domestic requirements have greatly increased in the case of gasoline and kerosene. Part of the current output of crude oil is going to storage.

Plant for dehydration of crude oil at Merkwiller-Pechelbronn (Bas-Rhine), France

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Federal Stipulations Retard Development

Active co-operation between Federal agencies and companies and others engaged in developing oil lands in the Rocky Mountain states, including New Mexico, towards drafting a form of unit plan which is practical, would remove difficulties which are retarding development in these states.

Such development means much to the states, to individual land owners and to the Federal government in the way of revenue and to others in the purchase of equipment, materials and the employment of large numbers of persons.

The difficulties arise from the fact that in these five states exploratory work invariably encounters blocks of Federal land interspersed among fee land and state lands, in effect subjecting operations to the rules and regulations made by the government.

A company drilling a discovery well cannot produce it or drill additional wells unless it complies with these Federal stipulations which include agreement to operate under such reasonable co-operative or unit plan as the Secretary of the Interior may in his discretion approve or prescribe.

It has been found almost impossible to get property owners to accept the stipulations prescribed by the government. Most of the operators favor unit operation, but because of this unwillingness of property owners and other impractical conditions in the stipulations they cannot go ahead.

The problem is serious as it involves so much but its solution should be easy as practical unitization plans are being made effective right along in other states, where the Federal government is not involved in development operations.

These particular stipulations imposed by the Federal government in drafting unitization plans are the stumbling block at present. The interests of the Federal government and all others still would be conserved and much benefit would accrue to all if these stipulations were modified.

It is probable if a conference of Federal government representatives and engineers and production men of different companies was arranged it might very easily iron out all the difficulties.

California Can Write Own Ticket

How long the crude price reductions in California will last is up to the operators who have been overproducing. Their overproduction forced the cut and it is for them to restore the balance of supply with demand that alone can bring back petroleum prices to a profitable level.

Chairman Neal H. Anderson of the Committee of Seven named by a mass meeting of producers last June to work out an agreement on curtailment between the marketing companies and the independent producers holds that the cuts in posted prices emphasize the need for the signatures of the small percentage of operators who have so far refused to join producers' agreement.

"We have nearly 80 per cent of the state's production signed to the agreement or definitely promised," he says in announcing that efforts to obtain signatures will be continued until September 7 by his committee and by the Oil Producers' Agency of which Ralph B. Lloyd is chairman.

Mr. Lloyd, too, emphasized that "the matter of curtailment is entirely in the hands of the independent producer" adding that "as to the price of oil he can write his own ticket".

He has been writing it with overproduction although plainly and continually warned that a price reduction was inevitable unless production was curtailed. Now that the reduction has been made, perhaps he will be more ready to cooperate in restoring and maintaining normal conditions.

California has had experiences of this sort before. It should not take long to learn the present lesson.

New Oil Legislation at Special Session

The special session of the Texas legislature called by Governor Allred for September 16 is regarded as practically certain to attempt new oil legislation.

A legislative committee has been investigating the enforcement of existing state laws and the regulations by the Railroad Commission and there have been reports that the committee favors the creation of a separate oil and gas commission to replace the present railroad commission.

The effects of the operation of the confiscation law which has been charged with assisting rather than retarding the "hot" oil operators are also likely to figure in the legislative discussions. Buying back confiscated oil and thereby legalizing it within the state seems to make a travesty of the legislature's previous effort to strengthen the existing law.

The legislators would do well to remember that whatever they do in regard to oil legislation will be noted by Congress and that it will have a direct influence on the consideration of Federal legislation at the next session in Washington.

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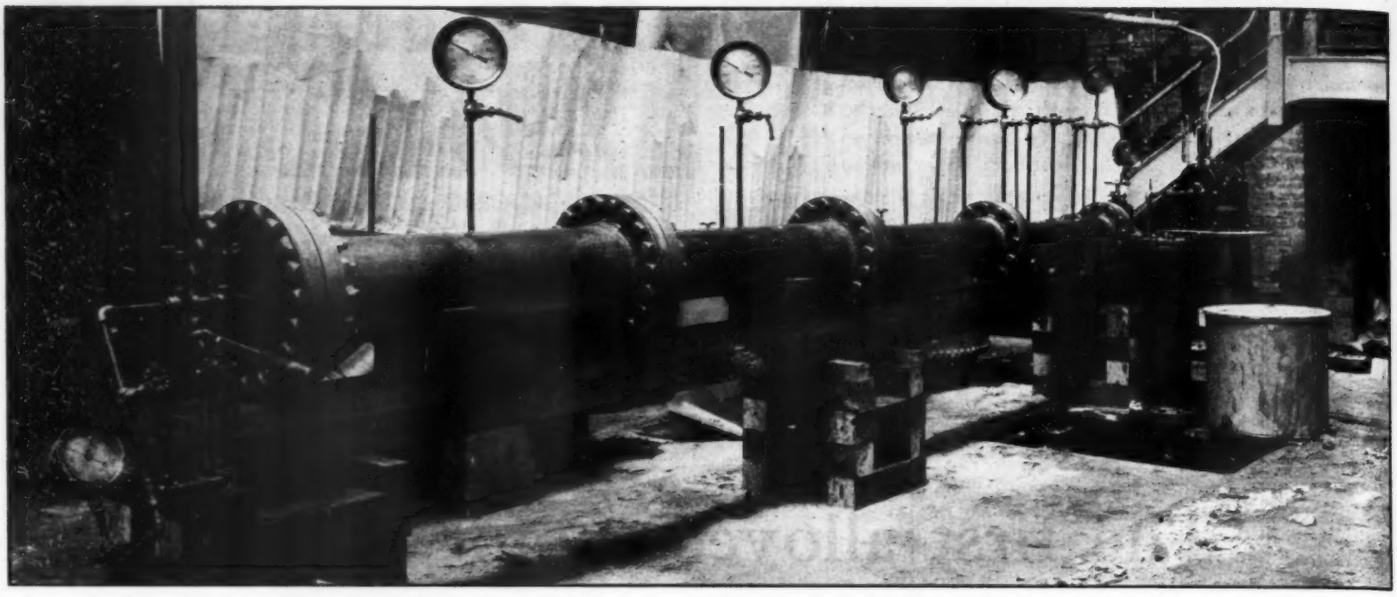


Fig. 3—Steel cone after steam jacket was removed

Diameter of Well Influences Pressure Gradient and the Rate of Oil Flow

By L. C. UREN, J. DOMERCQ, JR., and J. MEJIA
University of California*†

THAT THE DIAMETER OF A well through the oil-producing formation has an important influence on its rate of production, is a principle accepted by many petroleum technologists. Knowledge of this principle extends back at least to the time when Slichter and King[1] confirmed it in a study of the dynamics of flow of water through porous strata into wells. More recently, the senior author[2] and his associates[3] have produced qualitative experimental data confirming the principle as applied to drainage of expanding oil and gas mixtures, and suggesting that wells of large diameter, or wells having cavities about them within the reservoir rock, enjoy a material advantage in competition with wells of ordinary diameter. Apparently, however, no one up to the present time has produced experimental data designed to indicate quantitatively the advantages that large diameter wells possess in comparison with wells of normal diameter producing under comparable conditions. The present paper reviews some preliminary experimental results of this character, together with some conclusions and speculations based thereon that further emphasize the importance of well diameter as a factor in determining the efficiency of oil recovery.

It is of course, well understood that in a reservoir rock of uniform thickness and permeability, oil and gas flow toward the wells along radial lines. The cross-section of the reservoir rock through which the fluids must move, becomes ever smaller as the wall of the well is approached. The velocity of flow must therefore correspondingly increase, an effect that is accentuated by the rapid increase in volume of the fluid due to release of gas from solution and expansion that results from rapid reduction of pressure in the vicinity of the wall of the well. We may represent the changing cross-section of flow diagrammatically as illustrated in Figure 1. Here ABCD represents a square inch on the wall of a well 6 inches in diameter and segment ABCDEFGH, parallel with the bedding planes of the productive formation, represents the prism of oil-reservoir rock that yields the total

Fig. 1—Relative wall areas

volume of oil and gas passing through the square-inch on the wall of the well. IJKL is the area intercepted by this prism on the walls of a concentric 60-inch well. We may think of this theoretical wedge-shaped prism of oil-reservoir rock as a drainage unit or element, the entire production of the well being derived from a number of such units which make up the total thickness and expanse of reservoir rock surrounding the well.

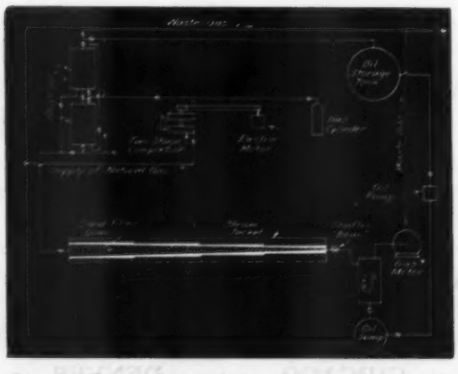


Fig. 2—Flow sheet showing connections for making drainage tests

It has been demonstrated that the resistance offered by a porous rock to flow of fluids through it is directly proportional to the rate of flow[4]. It follows therefore, that near the wall of a well where flow is comparatively rapid, the rock resistance and pressure loss is considerably greater than at points remote from the wall of the well where the velocity of flow is very low. In the theoretical drainage element referred to above, at the wall of a well having a radius of 3 inches where the cross-section of the reservoir rock is but 1 square inch, the rate of flow would be at least 10 times that at a cross-section 30 inches back in the reservoir rock from the axis of the well. The ratio of 10 to 1 cited for the relative flow velocities at the assumed distances from the axis of the well, would hold true if we were dealing with a fluid of constant volume; but where the volume of fluid is constantly increasing due to gas expansion, it is clear that an even greater ratio of relative velocities would apply.

The experimental results presented herein were secured with the aid of an apparatus that closely reproduces all of the physical conditions existing within the reservoir rock about a high-pressure flowing well. This apparatus has been in use over a period of several years in the petroleum engineering laboratories of the University of California and has been described in detail in an earlier paper[5] published by the Institute in 1932. It will be sufficient here to describe it only in general terms, with the expectation that one interested in securing dimensional and other details, will find them in the earlier paper to which reference is given.

The apparatus employed is for all practical purposes a replica of the theoretical drainage unit or element described above. However, instead of being constructed in the form of a wedge-shaped prism, the laboratory apparatus, in order to better resist distortion under high pressure, takes the form of a cone. At every cross-section, the cone has

*Before annual meeting, Petroleum Division, A.I.M.E., New York City.

†Authors' title: "Influence of Well Diameter Upon Pressure Gradient and Rate of Flow of Oil Through the Reservoir Rock in the Vicinity of a High-Pressure Flowing Well."

precisely the same cross-section as the theoretical drainage prism; consequently, similar flow velocities and pressure readjustments would occur within it as fluids move away from the large end.

The conical drainage apparatus, filled with tightly rammed unconsolidated sand, is constructed of segments of steel pipe and is lined with accurately molded neat cement. The sand column is 20 feet long, 1 square inch in cross-section at the small end and 80 square inches in cross-section at the large end. The 1-inch cross-section is considered to be an area on the vertical wall of a well 6 inches in diameter. Facilities are available for saturating crude petroleum with natural gas up to pressures as high as 2,000 pounds per square inch, for filling the pores of the sand column with gas-saturated oil, and maintaining a flow of such oil into the large end of the column and out through the small end. The pressure variation along the cone during flow, as indicated by a series of pressure gauges, is a measure of the pressure gradient that would exist under comparable conditions in an actual reservoir sand, from the wall of a flowing well for a distance of 20 feet back into the producing formation.

The apparatus permits of making tests with gas-saturated oils under formation pressures as great as 2,000 pounds per square inch, and with rates of flow comparable with those in wells producing several thousand barrels of oil per day. For maintenance of temperatures corresponding to those existing in a deep-seated oil sand, a steam jacket is provided about the sand column, and connecting high-pressure pipes—also steam-heated—lead the gas-saturated oil from the absorber to the sand filled cone. Figure 2 presents a diagrammatic outline of the several parts of the apparatus. Figure 3 is a reproduction of a photograph of the steel cone with steam jacket removed; while Figure 4 shows it in position about the cone. Figure 5 presents a photograph of the absorber and compressor used in saturated oils with gas at high pressures.

Two series of tests were performed under comparable conditions, except that in one group of experiments the cone was completely filled with sand, so that it was in effect, producing through the wall of a well 6 inches in diameter. In the second group of experiments, the screen confining the sand within the tube was set 2½ feet from

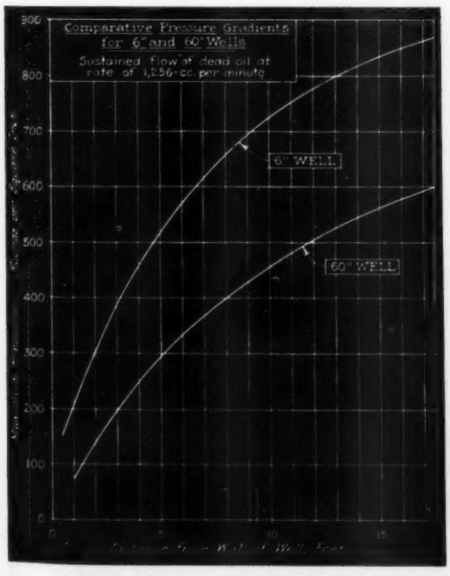


Fig. 6—Relative pressure gradients

the delivery end of the cone and the sand removed on the down-stream side so that delivery was through the wall of a well 60 inches in diameter.

In each of the two series of experiments, tests were made with several different "formation" pressures. In some experiments, herein referred to as "sustained flow tests," the test pressure was maintained at the large end of the cone and flow maintained with a constant rate of delivery of oil at the discharge end until equilibrium pressure conditions throughout the sand column were attained. In other experiments herein referred to as "closed-flow tests," the sand column was charged with gas-saturated oil at the desired "formation pressure." Then the inlet valve at the large end was closed, the outlet valve at the small end was opened and the oil allowed to escape under the influence of the expansive force of the gas released from solu-

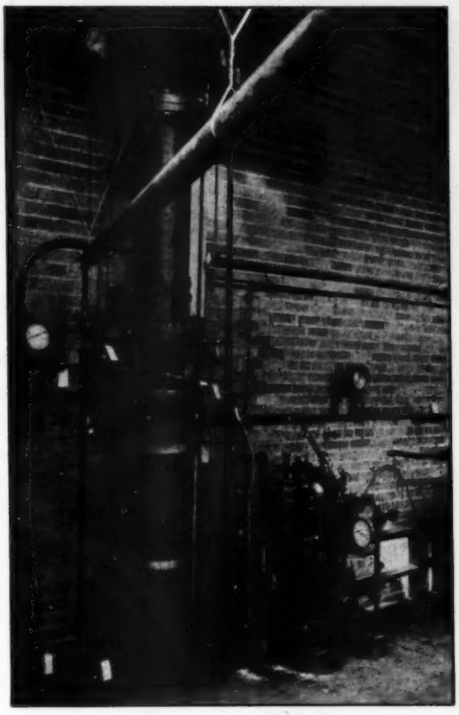


Fig. 5—Absorber and compressor used in preparing gas saturated sand

tion. In each experiment, the pressure gradient along the cone was determined by observation of pressure gauges connecting at short intervals directly with the sand column. Also, the rate of flow was recorded for each sustained flow test, and in closed-flow tests the rate of flow and cumulative production were recorded at brief time intervals.

The oil used in these tests was a California asphaltic base crude of 24° A.P.I. gravity and having a viscosity of 0.03 poises at 65° F., the prevailing temperature at which the tests were conducted. The surface tension at this same temperature, as measured with the Du Nouy tensiometer was 32.3 dynes per cm. The gas used in saturating the oil was Kettleman Hills natural gas from which the readily condensable fractions had been previously extracted. Its composition was approximately 78 per cent methane and 22 per cent ethane. The sand used was a Monterey beach sand having the grain-size distribution indicated in Table 1 herewith, and it was compacted in the cone to an approximately uniform porosity, averaging 32.8 per cent.

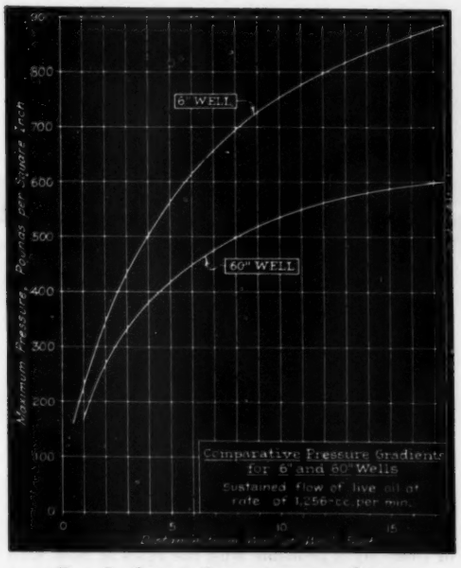


Fig. 7—Live oil pressure gradient

It will be observed that the reservoir sand is of a character that would possess high permeability and that the oil is of perhaps average viscosity among California crudes, but of relatively high viscosity in comparison with most Mid-Continent and eastern crudes. In comparison with most reservoir rocks encountered in the field, the factors entering into our conical tube experiments undoubtedly present a condition of abnormally high permeability. We should therefore expect field drainage efficiency to be much less perfect, pressure gradients in the vicinity of wells in the field considerably more abrupt and the differences in these and other respects between small and large diameter wells to be emphasized to a greater degree under field conditions than here.

TABLE 1—RESULTS OF SCREEN ANALYSIS OF SAND* USED IN EXPERIMENTS WITH THE CONICAL DRAINAGE APPARATUS

Mesh†	Percentage	Cumulative per cent
On 10	0.04	0 04
10- 14	0.07	0.11
14- 28	6.14	6.25
28- 35	21.46	27.71
35- 48	39 76	67.47
48- 65	29.20	96.67
65-100	2 51	99.18
100-200	0.54	99.72
Through 200	0.25	00.97

*Uniformity coefficient: 2.00; "effective" grain size: 0.05 mm.
†Using Tyler standard screens.

Sustained flow tests were performed under conditions simulating flow into both 6-inch and 60-inch wells. Experiments were made with sustained basal pressures at the large end of the cone, ranging from 200 to 1,400 pounds per square inch. In one series of tests "dead" oil (i.e., oil containing no or very little dissolved gas) was used and in another series, "live" oil saturated with dissolved gas at the pressures maintained, was employed. Space does not permit of a complete record of all of the many tests made, but typical selections are offered from the assembled data for comparative purposes. For the convenience of the reader, they will be presented in graphic form.

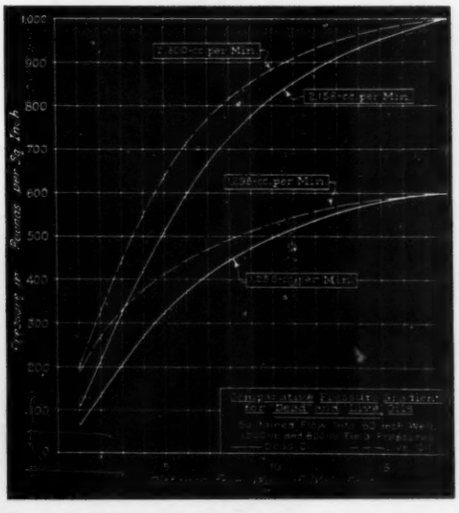


Fig. 8—Sustained flow of dead and live oil at two pressures

Figure 6 presents two pressure gradients secured in experiments using "dead" oil, each obtained at the same rate of flow, one for a 6-inch well and the other for a 60-inch well. It will be observed that the established rate of flow was maintained in the case of the 60-inch well with a differential pressure between the two ends of the cone of 600 pounds per square inch, while in the case of the 6-inch well, a differential pressure of 862 pounds was necessary. The gradient created

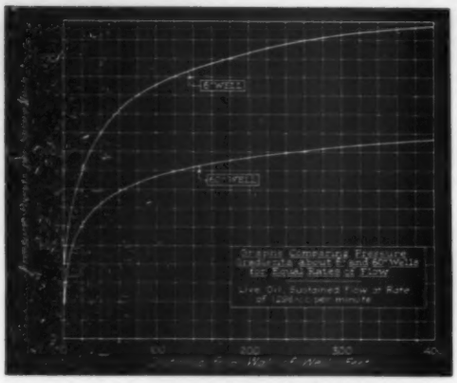


Fig. 9—Pressure gradients for equal rates of oil flow

about the small well was considerably steeper than that in the vicinity of the 60-inch well. Figure 7 presents two additional pressure gradients obtained with "live" oil, one for a 6-inch and the other for a 60-inch well. Again, the 6-inch well gradient is considerably steeper than that created by the 60-inch well, and a differential pressure nearly 300 pounds greater was necessary to maintain the recorded flow of 1,256 cc. per minute.

Pressure gradients with "live" oil are invariably steeper in the vicinity of the wall of the well than when "dead" oil is used, whether the diameter of the well be large or small. Figure 8 presents typical comparative gradients for both "live" and "dead" oil obtained with the 60-inch well at two different basal pressures. It will be noted that for a given basal pressure, somewhat more "live" oil flows than "dead" oil. The steeper gradients obtained with live oil are, of course, due to the greater volume of fluid in motion and higher flow velocities resulting from release of gas from oil.

Extrapolation of the two pressure gradients presented in Figure 7 by plotting on semi-log paper yields the graphs reproduced in Figure 9. These afford an interesting basis for comparison of the approximate drainage influence developed under the experimental conditions presented in the 6-inch and 60-inch wells. For example, it is shown that at a distance of 300 feet from the axis of a 6-inch well, the formation pressure necessary to maintain a flow of 1,256 cc. per minutes, would be more than 600 pounds greater than that necessary to maintain the same rate of flow over a similar distance to a 60-inch well. Stated another way, a formation pressure of 1,000 pounds per square inch is capable of maintaining a flow at the rate of 1,256 cc. per minute over a distance of 270 feet toward a 60-inch well, but the same pressure is capable of moving the same quantity over a distance of only 30 feet toward a 6-inch well. For movement of oil at this rate over a radius of 350 feet, the 6-inch well requires about 58 per cent greater pressure than the 60-inch well.

It should perhaps be explained that the extrapolated gradients reproduced in Figure 9 imply a reservoir condition in which the oil is undersaturated with dissolved gas at distances in excess of 17½ feet from the wall of the well, there being no gas released from solution except within 17½ feet of the wall of the well. While such a condition would seldom be true in the field, it is believed that the extrapolated graphs are not greatly divergent from the usual field condition, in as much as the volume of gas released from solution and existing in the formation as such at pressures above 500 pounds per square inch, is comparatively small. In any case, the two extrapolated gradients are subject to approximately the same corrections and are therefore comparable.

Under a given basal pressure, the 60-inch well invariably yields about 145 to 150 per cent more "dead" oil than does the 6-inch well under comparable conditions. It is interesting to note that this figure accords very closely with the rate of flow indicated as probable by a modified form of the original Slichter[1] equation proposed in a paper by the senior author[2] in 1924. This formula indicates that the rate of production varies inversely as the logarithm of the ratio of the total distance traversed by the oil in its movement through the reservoir rock, divided by the radius of the well. Figure 10 represents two graphs based on experimental data, with the aid of which the rate of flow of "dead" oil into either size of well under any specified pressure, may be readily predicted. Very similar relationships are to be noted in the graphs of Figure 11 presenting the rates of flow for "live" oil at different basal pressures for the 6-inch and 60-inch wells.

Again, as noted above, it has been observed that the rate of flow of "live" oil is greater, for a given basal pressure than the rate of flow of "dead" oil, though this is less noticeable with the 6-inch than with the 60-inch well. This confirms a conclusion reached in some of the earlier work with this apparatus, that gas bubble resistance to movement through the pore spaces of the reservoir rock is a force of comparatively small magnitude and does not seriously retard flow. At least, it may be said that any retarding influence that the gas bubbles may have, is more than offset by the reduced density and resistance to movement (viscosity?) that the mixture of gas bubbles and oil

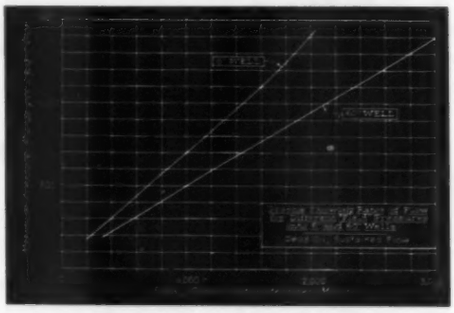


Fig. 10—Production as pressure changes

presents, in comparison with the density and viscosity of gas-free oil.

We may conveniently contrast the rates of production of the 6-inch and 60-inch wells, by determining the time necessary for each to produce a

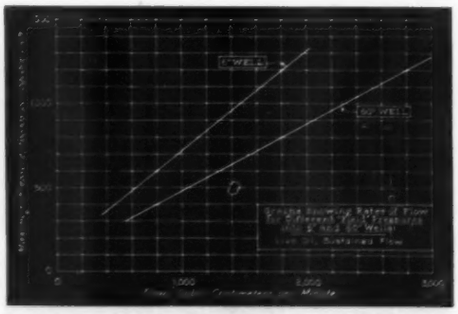


Fig. 11—Comparative rates of flow

unit volume of oil. This of course, varies with the pressure employed, and inspection of the experimental results plotted in Figure 12, will show that the advantage of the large diameter well in this respect, increases as the formation pressure diminishes. For example, at 1,400 pounds per square inch there is a difference of about 10 seconds between the two wells, while at 300 pounds the 6-inch well requires 36 seconds longer for the same production, and at 200 pounds it requires 76 seconds more time.

The reason for the greater rate of flow into the larger diameter well under given differential pressure is apparent when we consider the relative flow velocities at different distances from the wall of the well, as represented graphically in Figure 13. For "dead" oil, the rate of flow at the wall of a 6-inch well is necessarily 10 times that at the wall of a 60-inch well. Ten feet or more back in the sand from the wall of the well there is comparatively little difference in flow velocities. If the flow resistance increases directly as the rate of flow—as is probable with the rates of flow with which we are here concerned—it may be shown that for a given volume-rate of flow the resistance offered by the reservoir rock within 2¼ feet (30 inches minus 3 inches) of the wall by a 6-inch well, is greater than the resistance offered by the reservoir rock within 200 feet of the wall of a 60-inch producing well.

If large volumes of gas are flowing with the oil through the reservoir rock it is apparent that flow velocities will be materially greater than those indicated for "dead" oil in Figure 13. Computation of the rate of flow and resistance offered by flow of gas-oil mixtures through sand is fraught with considerable uncertainty, the rate of release of gas from solution with reduction of pressure, and the amounts of gas flowing at different distances from the wall of the well, being somewhat problematical.

A few "closed-flow" tests were performed to determine the influence of well diameter on ultimate recovery. In these tests, as previously explained, the pores of the sand are charged with gas-saturated oil and the inlet valve at the large end of the tube then closed. When the outlet valve is opened the oil expelled is produced only by the expansive effects of such gas as is present in solution in the oil. Due to the lesser resistance offered to flow by the larger diameter well, it invariably produces a greater total or ultimate volume of oil than the small well. Figure 14 presents production graphs showing the cumulative recoveries obtained in comparable tests in which an initial pressure of 600 pounds per square inch was used. After making due allowance for free oil in the apparatus outside of the sand body, it appears that the total recovery secured by the large well was more than twice as great as that secured by the small well. Yet the total volume of oil-saturated sand was less in the case of the large well than in the case of the small well. Computations based on the total pore space of the sand body available for storage of oil, and the gross recovery after exhaustion of the gas, indicate a percentage recovery of only 8.1 per cent for the 6-inch well and 17.6 per cent for the 60-inch well. The large diameter well thus not only enjoys a greater current rate of recovery but is more efficient in the sense that it secures a materially greater ultimate recovery.

Though gas-oil ratios were not determined with accuracy in these tests, it is clear that the 60-inch well produces with materially lower gas-oil ratios than the 6-inch well. For example, in the gradients of Figure 7 in as much as the basal pressure necessary to maintain the rate of flow of 1,256 cc. per minute through the experimental cone, is some 280 pounds greater for the 6-inch well than for the 60-inch well, the entering oil, if saturated, would contain about 120 cubic feet more of gas per barrel. Aside from a higher formational gas-oil ratio, it also seems probable that there would be more "slippage" of gas through the oil in the case of the small well. This is evidenced by the materially lower percentage recovery secured with the 6-inch well in comparison with that obtained by the 60-inch well in the closed flow tests. In so far as gas-oil ratios may be taken as a measure of recovery efficiency, it is clear that the advantage is again with the large diameter well.

Though it is not the purpose of this paper to discuss in detail the practical means by which the advantages of large diameter wells may be realized

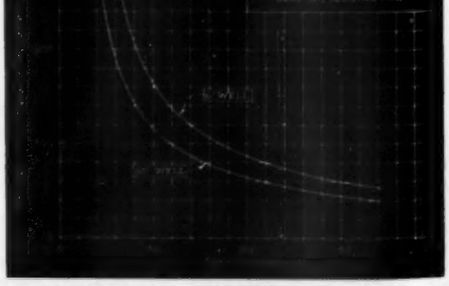
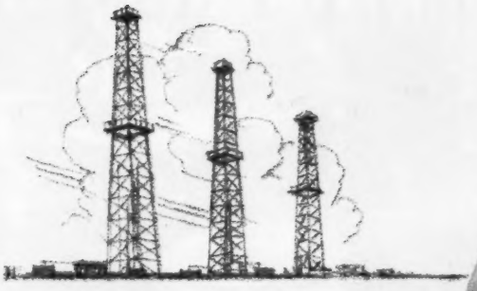


Fig. 12—Time needed to produce 1,000 cc. of oil at various pressures



As good as when first installed!

After 4 years of severe salt water service in the Luling district, Texas

A salt-water disposal line 4 years old and still perfectly good is something new in the experience of operators in the Luling district, Texas. That is what was found not long ago when a piece of 6⅝" Duroline Pipe was taken up for inspection from a test line in that section. The cement lining in this pipe was totally unaffected, having no encrustation from the water, and was as firm, hard, and tight as when first installed. Naturally this demonstration was of special interest to all operators in the neighboring area, for unlined pipe has usually given trouble within a year, and failed entirely within two or three years after installation.

Duroline Pipe was scientifically developed for the purpose of resisting the destructive action of various waters that rust and corrode unprotected pipe metal. The special cement lining does not permit corrosive waters to reach the pipe metal and therefore no corrosion takes place. Untimely repairs or replacements are avoided, service is made continuous, and greater economy is assured.

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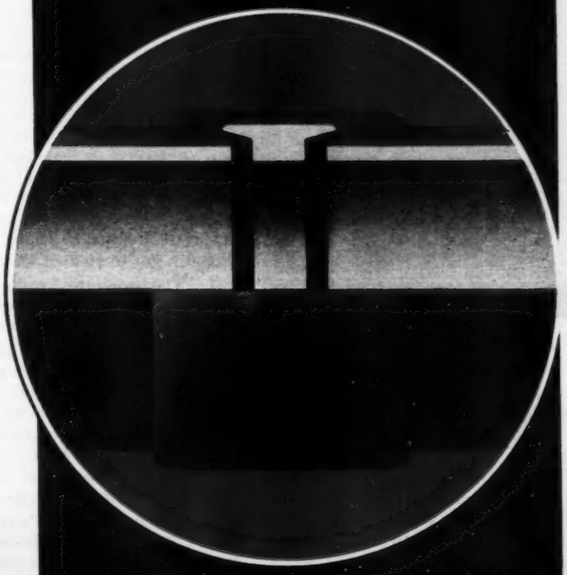

NATIONAL DUROLINE PIPE

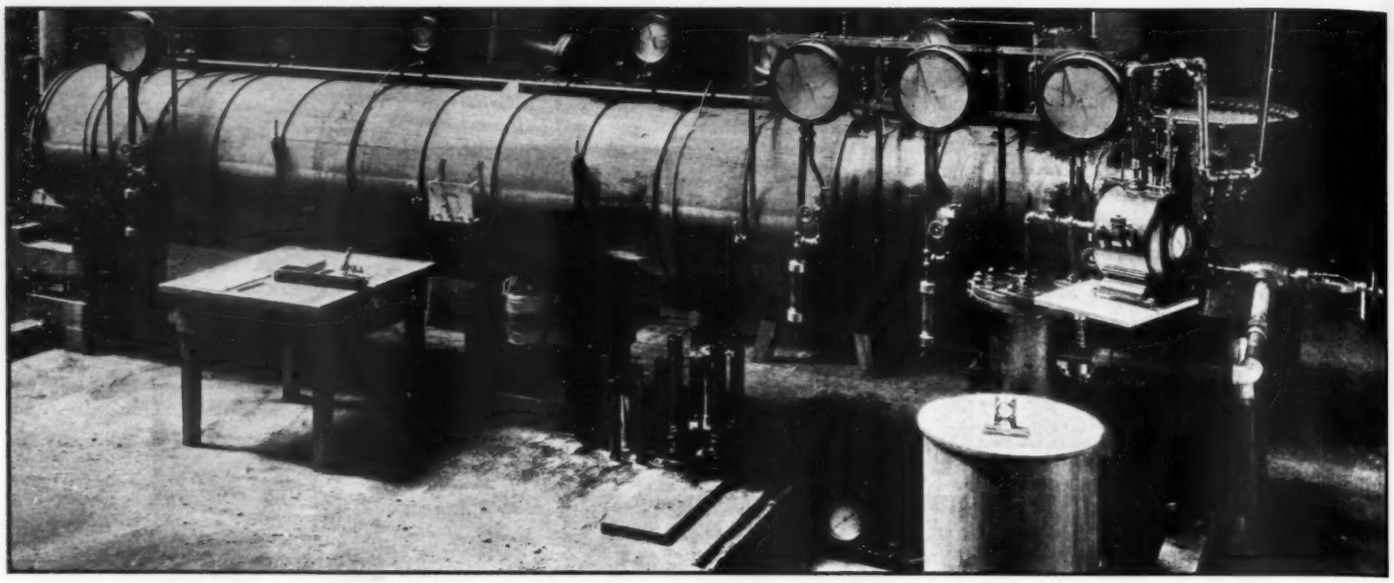

Fig. 4—Steel cone with steam heating jacket in place ready for operation

in field practice, it seems appropriate to briefly review the methods by means of which the authors believe that such advantages could be substantially obtained. It would obviously be uneconomic, in some cases impractical, to drill deep wells of 60 inches or more in diameter from the surface. The same advantages may be realized, however, by drilling them of normal diameter and then developing cavities of 5 feet or more in diameter about

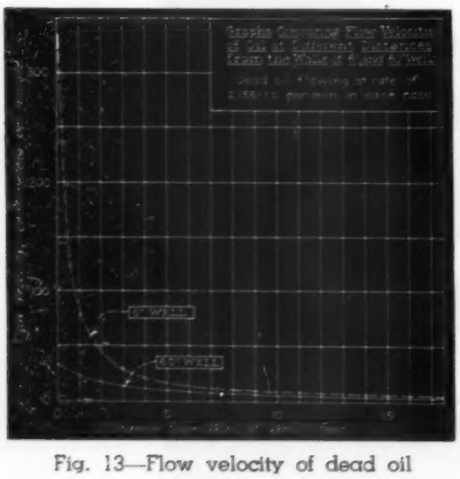

Fig. 13—Flow velocity of dead oil

them within the reservoir rock. In hard rocks, this may be accomplished with the aid of explosives. The advantages to be derived from "shooting" wells are well known. The authors believe that the larger rates of production, the lower gas-oil ratios[6] and the greater ultimate recoveries obtainable from wells that have been shot[7], is in no small part due to the formation of cavities about them.

In semiconsolidated and unconsolidated reservoir rocks, the same result may be achieved by hydraulic methods and to some extent also by special types of mechanical underreamers. That the hydraulic system of forming cavities about wells within the reservoir rock and of filling them with gravel—a system proposed by the senior author[8] in 1924—is practical, has recently been proved by the successful completion of a number of deep gravel-wall water wells by this method.[9] In a typical case, a well drilled for water near Sumter, S. C., to a depth of 600 feet was reamed near the bottom by hydraulic jets and 100 cubic yards of gravel introduced, also by hydraulic methods, to fill the cavity thus formed. The well produces more than twice as much water as other wells of normal diameter drilled only 200 feet distant and producing from the same stratigraphic horizon. Furthermore, the well with the gravel filled cavity produces no sand, which is troublesome in the surrounding wells, the gravel serving as a perfect filter or screen. There would appear to be no reason why this same result could not be achieved in any oil well producing from unconsolidated or semiconsolidated formations, and at any depth.

Petroleum engineers have made important progress in other ways in improving recovery efficiency, but comparatively little effort has as yet been made to control this most important factor of well diameter. We go on year after year drilling small diameter wells, apparently content with a result that obviously could be greatly improved. Practical ways must be found to secure the substantial advantages that go with large diameter wells. More may be accomplished in improving recovery efficiency in this way than by any other. It is the one avenue that yet remains to be explored in achieving the highest possible ultimate recovery by well drainage methods. Fewer wells, lower development cost, lower production cost, more efficient utilization of the natural expulsive forces, greater per-well-per-day yields and greater ultimate recoveries and per-acre yields—all are possible by drilling wells of larger diameter.

Consideration of the experimental results and theoretical considerations present in this paper would seem to justify the following conclusions:

1. The pressure gradient in the vicinity of a large diameter well is less abrupt than in the vicinity of a small diameter well.

2. Irrespective of the diameter of the well, the pressure gradient is more abrupt in the immediate vicinity of the well when gas accompanies the oil than when gas is absent. The gradient becomes steeper as the differential pressure and gas-oil ratio increase. However, the differences between "live" oil and "dead" oil in these respects are less with large diameter wells than with small.

3. Extrapolation of experimental pressure gradients for 6-inch and 60-inch wells indicates that large diameter wells develop a materially greater drainage radius under a given field pressure than small diameter wells.

4. The rate of production of a 60-inch well producing "dead" oil under a given set of reservoir conditions is nearly 1.5 times that of a 6-inch.

5. The rate of flow of "live" oil under a given pressure differential is greater than for "dead" oil under the same differential pressure.

6. The time necessary for a well to produce a unit volume of oil under a given field pressure, diminishes as the diameter of the well is increased.

7. Large diameter wells secure a larger ultimate recovery than small diameter wells under otherwise comparable conditions.

8. Large diameter wells produce with lower gas-oil ratios than small diameter wells.

9. The advantages that go with large diameter wells may be realized practically by forming cavities about them within the oil reservoir rock.

10. The oil reservoir rock in the immediate vicinity of the wall of a producing oil well is a critical zone in which much of the energy utilized in moving the oil through the reservoir rock into the well is consumed.

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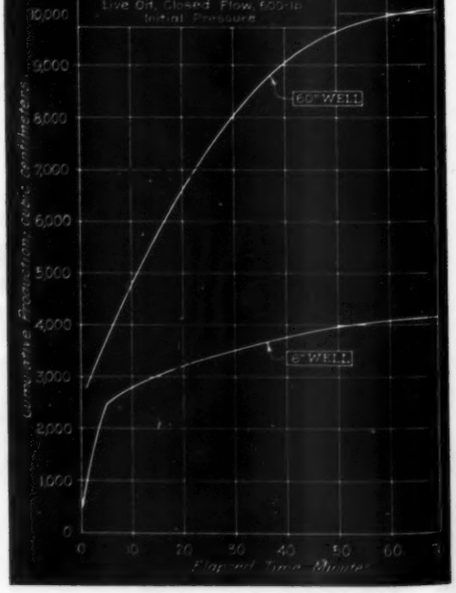


Fig. 14—Accumulative production at constant initial pressures

Salt Water Disposal Wells Solution of Problems for Operators in Kansas

By L. G. E. BIGNELL

Taking advantage of laws recently passed by the last Kansas Legislature permitting the return of salt water produced with oil to nonproductive formations the operators in most Kansas oil fields are now successfully disposing of the salt water problem by specially drilled wells for this purpose.

PRACTICALLY ALL THE OIL fields have water below or at the edge of the oil horizon, and in time as the field is produced this water will break into the wells and has to be produced along with the oil. When oil fields "go to water," as the saying is, many think this is the end of production and predict all kinds of dire things for the field.

Many of the Kansas fields produce from limestone formations and have started to making a considerable proportion of salt water along with the oil. This is a normal condition and anticipated by most production men, so the mere fact water is being produced with the oil in many of the west Kansas pools is not alarming.

During the last session of the State Legislature in Kansas laws were passed permitting the operators to return salt water to any formation not containing domestic water that would take it. It is not permissible to dump the water into surface streams or to accumulate it in pits to be disposed of during high water periods.

In the Burrton Pool most of the well producing from the Hunton lime are making appreciable quantities of water and this water is being returned to a porous section of the Wellington formation. This formation is taking the water freely and up to the present time no water well has been found to be incapable of taking all the water.

When the oil wells were drilled some blowouts occurred in the Wellington formation. They did not last long and the mud was suddenly blown out of the hole and when operations were again started it was usually found mud circulation could not be established. It was common practice to drill the hole through the Wellington and then set a string of 12½-inch casing and cement it back as far as possible, usually up to the open formation.

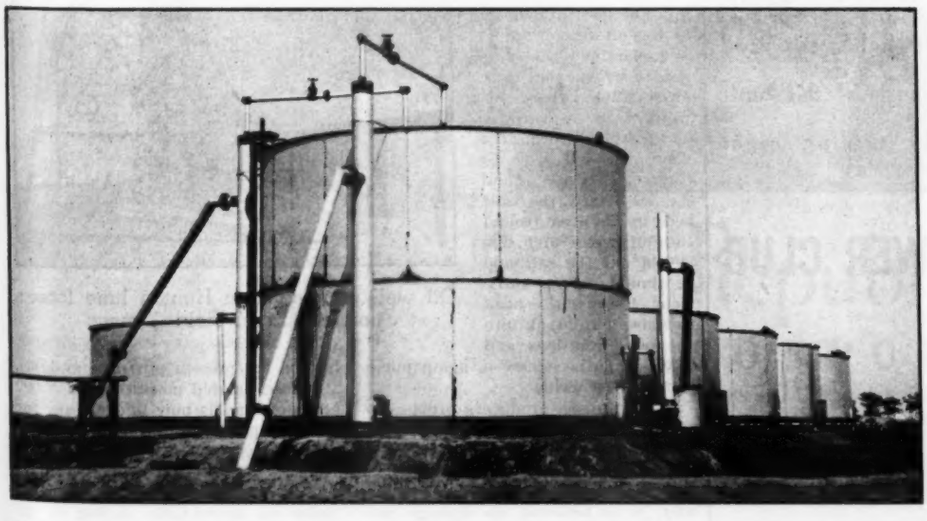
This Wellington formation outcrops a short distance east of the Burrton Field and to the west of the field this same horizon contains thick beds of salt. It seems logical to assume all of the Wellington formation contained massive salt beds when first laid down and this salt section extended through its entire length. When the formation was uplifted and eroded the salt near the outcrop was probably removed by circulating surface waters and this process left many cavities later filled with some form of noninflammable gas under considerable pressure, and when the drill penetrated into these gas pockets the blowouts occurred.

In drilling the water wells into this porous Wellington formation it is usual practice to set about 150 feet of 12½-inch casing and cement it. The hole is then drilled to about 450 to 500 feet and a string of 8⅝-inch casing set and cemented. The hole is then drilled from 50 to 100 feet below the bottom of the 8⅝-inch casing and water in the formation will fill the hole to a depth of about 250 feet above the bottom.

This is salt water and if the gravity is 1.02 a column 250 feet high would exert a pressure of about 110 pounds per square inch against the formation. This indicates the formation pressure is about 110 pounds, but it has been found that adding disposal water to the top of the column of formation water will cause the added water to run into the hole very freely.

In the porth portion of the Burrton Field there are 15 wells making water from the Hunton formation, and this water along with the oil is delivered into tanks, where treating compound is added and the water separated from the oil is run into seven water disposal wells. This water runs into the disposal wells by gravity and is freely taken by the formation, and to date there has been no indication that the capacity of the Wellington formation to take this water has been reached.

Pumping unit powered by V-8 Ford engine in the Chase Field in Kansas



Bolted steel 1,000-bbl. capacity treating tank handling oil and water from Hunton lime well

Farther west other fields also have started to produce salt water, and in the Russell Pool, producing from the Oswald lime the wells are making appreciable quantities of water and much of it is being returned to a formation about 500 feet below the surface.

The section through which these water wells are drilled has the following stratigraphy:

Sand	0 to 28 feet
Sand and gravel	28 to 130 feet
Sand and shale	130 to 405 feet
Shale and gypsum	405 to 455 feet
Salt and gypsum	455 to 490 feet
Shale	490 to 500 feet

These wells are usually cased with 430 feet of 10¾-inch casing and cemented with 118 sacks of cement. Inside the 10¾-inch casing a string of 7-inch casing is run and cemented with 380 sacks of cement. This leaves about 70 feet of open hole above the salt found just below 500 feet and into these formations the water disappears.

In the Niedenthal Pool, also in Russell County, the water input wells are drilled about 415 feet deep and cased. This upper formation is of Dakota age and takes water freely. If the formations now open should cease to take water at any time it is

Photos by
J. E. HAMPSON,
Shreveport, La.

For drillers, producers, pipe line operators and refiners, power companies everywhere solve many a knotty problem with cheap, dependable electricity. Take lighting for instance. Fire is an ever-present hazard in the oil industry. But electric lights are used in every branch of this business, safely turning night into day.

PETROLEUM ELECTRIC POWER CLUB

proposed to drill the hole deeper as there is another porous sand at about 450 feet.

In this Dakota section in the Niedenthal Pool there are two water sands, one found between 100 and 140 feet carrying 60,184 parts per millions of solids of which 31,934 parts are chlorides and 5,060 parts sulphates. The gravity of this water is 1.0445. It is brackish and found in a sandy shale section.

From 295 to 300 feet a good potable water is found having a gravity of 1.004 and only 3,690 p.p.m. solids of which 1,542 parts are chlorides and 358 parts sulphates. This water is used for domestic purposes in this area and it is very necessary to protect it against contamination so the sand is carefully cased off in all oil and water input wells.

In the Big Basin sandstone of the Permian age found at 560 to 565 feet there is a second brackish water running 58,387 p.p.m. solids of which 30,695 parts are chlorides and 5,062 parts sulphates. Its gravity is 1.0433.

There has been some corrosion of casing in oil wells in the Russell Field probably due to contact with these brackish waters. To retard this corrosive action many of the wells have been recased and mud circulated behind the casing and allowed to remain instead of using cement. This mud was specially prepared and it is reported it has quite satisfactorily served its purpose in retarding corrosion up to this time.

These various methods of returning water to formations above the oil zone are used in several fields with variations to suit local stratigraphy.

However, some engineers do not approve of this method of water disposal as it is always possible this water may later break through into the oil formation. It is understood that this did occur in the Hendricks Field, where salt water was returned to a cavernous formation above the salt beds. In time this water found its way into the salt beds in the area around the oil wells and dissolved out the salt and in time built up sufficient hydrostatic head to cause it to break into the oil formations and it was then necessary to again pump it from the wells.

Some Kansas producers propose to return waste water to the same formation from which it has been produced but put it into wells drilled outside of the producing area. In this way, it is believed, no damage can be done to the oil for if the water moves up dip it will only serve to drive the oil ahead of it into the wells. As this oil is produced from limestone formations mostly and they are quite porous it is believed a large volume of water can be returned to the formation without damage.

In general Kansas producers are solving the salt water problems in a satisfactory manner and it is believed so long as water produced with the oil can be disposed of cheaply the fields will continue to produce for a long time to come. It is true it costs money to pump this water but as most of these wells are less than 3,500 feet deep and power costs are not high the oil recovered will justify the cost of handling the water.

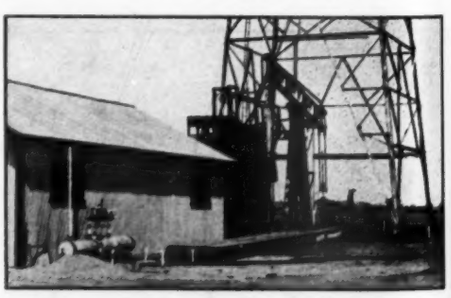
Arrow points to top of 8¼-inch casing in a water disposal well in North Burrton Field

Kansas' conservation rules limits the stroke of pumping equipment to a maximum length of 54 inches but do not limit the number of strokes per minute. Maximum size of tubing as set by rule is 3-inch diameter. Most lime wells are tubed with 3-inch pipe and have 2¾-inch working barrels. In the chat wells 2½-inch tubing and 2¼-inch barrels are used and the beam has 32-inch stroke and 25 per minute because these wells still need to be agitated more than pumped.

Because it is anticipated the wells will be long lived most operators are buying the best type equipment. This higher first cost is justified because as the amount of oil recovered declines it is reasonable to assume the proportion of water to be handled will increase and the duty upon the equipment will be most severe toward the end of the well's producing life.

From all available facts regarding the water situation in Kansas it seems reasonable to assume the operators there are not greatly concerned about future recoveries and expect to get their investment back with good profit. Wells in the eastern part of the State have been producing "sour oil" for many years accompanied by a considerable volume of water and have shown a profit.

Investment in new leases in western Kansas continues and drilling will go on, the principal drawback now being pipe line outlets for wells beyond the present pipe line systems.



Oil well pumped from Hunton lime formation in Burrton Field, Kansas

It is estimated more than 7,500,000 acres of land is now under lease for oil and gas exploration in Kansas and a large part of it is in western Kansas. With the average yearly rental of $1 per acre it is possible to make an appreciable saving in investment by testing leases promptly.

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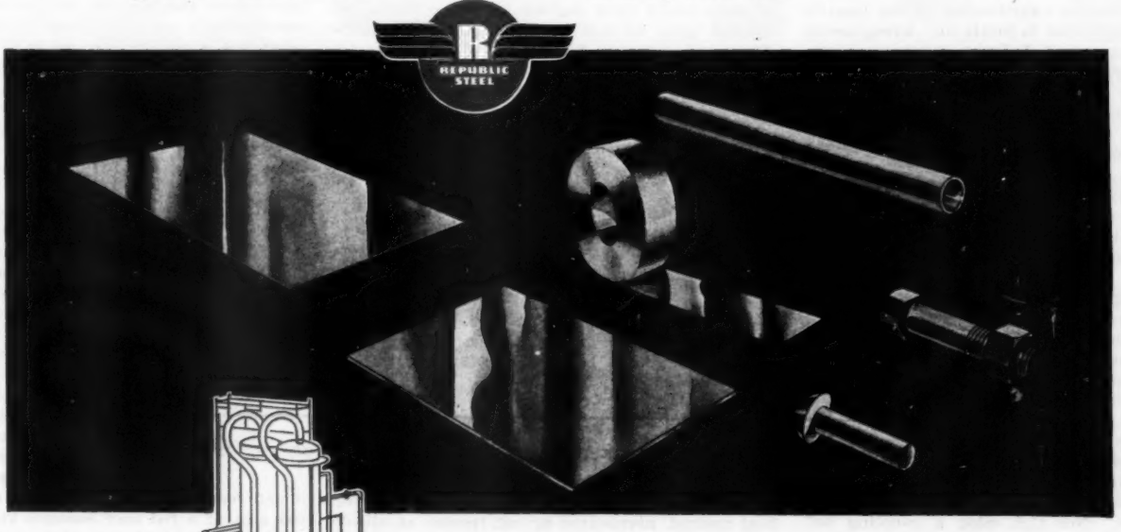

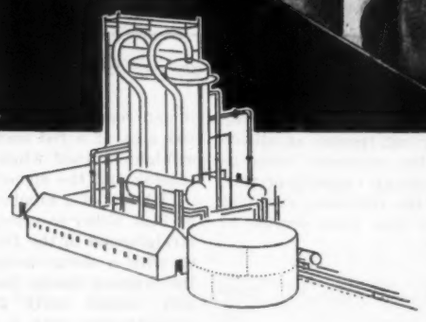

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Sucker Rod Failures Often Traceable to Incorrect Practices in Oil Fields

By W. R. SHIMER
Metallurgical Engineer, Bethlehem Steel Co.

SPECIAL STEELS CAN BE heat treated to give long life in severe service under atmospheric or "dry" conditions for use in automobile axles, springs, drop hammer pistons and hundreds of similar articles, but these same steels may not give good service under fluid conditions such as those to which a sucker rod may be subjected. Some fields produce hydrogen sulphide with the oil and wells in these areas have a tendency to cause hydrogen embrittlement in the rod. Rods operating in wells even not considered corrosive will invariably give shorter life than the same metal operating under dry conditions.

In the laboratory, a sucker rod can be made which is second to none. An excellent combination of tensile strength, yield point, elongation and reduction of area can be obtained. High impact value and high endurance limit values can also be obtained. However, some of these ideal metallurgical rods as determined by laboratory tests do not always make a favorable showing in actual service. One cannot be sure about the performance of any type of material for sucker rods until after a large number of strings have been in service in various fields for a reasonable time.

Upon checking field experience, we many times find contradictory results. I have in mind one field in California where two oil companies are pumping from the same level on adjacent properties. Both companies have a number of strings of the same make of sucker rods in service and Company A has had no breaks and is more than pleased with its choice; whereas its neighbor, Company B, has had a number of failures and is not pleased with its choice. A careful examination of the unsatisfactory rods has failed to locate any wrong metallurgically. Company A balances its pumps carefully, however, and in general takes considerable care in handling the rods, and this may be the reason for its good record.

Many things can happen to a sucker rod after it leaves the manufacturing plant to cause failures, such as, bending or nicking in handling. Damage may also be done when either pulling or running in a string. Crooked holes will both tend to bend a rod or put excessive strain on one side to also cause friction in the tubing. High momentary overloads will start a rod on the way to fatigue failure. Not tightening a coupling sufficiently will invariably cause pin breaks. I have seen strings run into a well when a three-rod stand was slack when being coupled, and then when lifting out of the elevator this slack was taken up suddenly, taking all of the weight of the rods already in the hole, causing a severe shock and momentary overload which can harm the rod. Also in dropping a stand too rapidly in a hole, the upset ends strike the tubing and may result in damage to the rod.

Invariably, after one rod in a string has failed, more failures can be expected as some of the rods beneath the break become bent to a greater or lesser degree due to rebound and handling.

It is generally believed that corrosion and corrosion fatigue are the major causes for rod failures when other conditions are found to be normal.

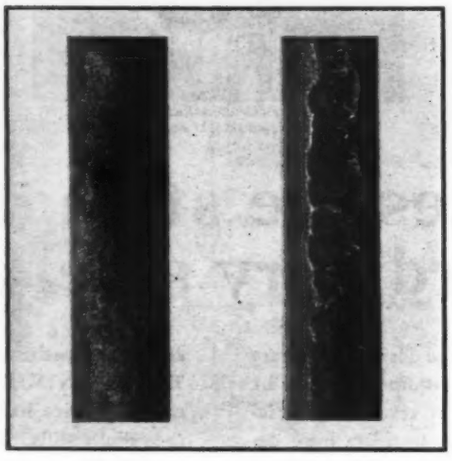

Fig. 1 Fig. 2

Overloaded and corroded rods each showing "Fatigulettes"

In a large number of cases, when the failed end of a rod containing a typical fatigue fracture is hot acid etched, a number of small transverse cracks will be found near and within an inch of the fracture on that side of the bar where the nucleus of the fatigue occurred. We have termed these cracks "fatigulettes" for the reason that any of them could have started a fatigue break but did not grow as fast as the one causing failure. These are shown in Figures 1 and 2.

Fig. 3—A 30-foot sucker rod as taken from a well showing toughness of metal

Steels of certain compositions, whether fully heat treated, normalized or not treated at all, do not stand up as well in the corrosive wells as certain other compositions. As an example of this, a fully heat treated rod of the following excellent physical properties did not give good service in hydrogen sulphide wells:

Tensile strength, pounds	94,000
Electric limit, pounds	77,000
Elongation, per cent	40
Reduction, per cent	72
Izod test, foot-pounds	110

Furthermore, on the general average, the rod of the above good physical properties in service was not found to be sufficiently superior to other metallurgically inferior grades in noncorrosive wells to justify the additional cost of full heat treatment. This type of steel, working under dry conditions would resist fatigue failure indefinitely. Figure 4 shows this rod tied in a knot when cold, illustrating its extreme toughness.

It has been found, therefore, that the composition of steel as well as heat treatment also plays an important part in sucker rod service. In recent years sucker rod manufacturers have had marked success in developing corrosion-resisting rods made from various combinations of alloys.

Several years ago a producer complained of having too many and too frequent breaks. It developed that he used the rods in a cable-drilled well and was pumping with the cable equipment with no attempt made to balance the beam. A super-rod would not stand such punishment.

I know of a case where a 5,000-foot string of rods was stretched 135 feet due to pump sticking when trying to take it out of a well. After stretching this amount, one rod broke and the reduction of area at the break was 70 per cent. It had necked down exactly like a tensile test specimen. Other rods in this string were michrometered and were found to be reduced in diameter. This cold stretching lowers the true elastic limit and a string put to this punishment should not be put back into the well. Such a string, however, can be used in lighter pumping wells if given a strain relief anneal at about 1,000° F.

One oil company engineer has made an interesting remark to me. He stated that there are approximately 40 different kinds of sucker rods on the market, of various physical properties ranging from 48,000 pounds tensile strength up to 130,000 pounds, with various degrees of refinement and from high to low ductility and high to low impact values and that one of these grades should be outstandingly superior. From actual service, however, this is not the case, as in some quarters, one type rod seems to be outstandingly good. Whereas, in other quarters the same make may have a poor record. No rod can be made that is foolproof, but I believe I am safe in making the statement that many men working in the oil fields believe that steel, being steel, should be unbreakable.

Illustration 3 shows a section of a 30-foot rod taken out of a well. This of course, is an unusual case but demonstrates what can happen; and if a rod can be crushed in such a manner in a well it can readily be seen that kinks can be put in a rod also. If a rod once becomes kinked, it tries to straighten itself when loaded, placing one side in tension and the opposite side in compression.

I know of a number of cases where rods kinked or bent either in service or in handling have been straightened in the field by bending them straight or with a sledge hammer. Such practice destroys the original elastic limit at this point and invariably causes early failure. Furthermore, when straightening with a sledge, the rod may either become flattened or nicked and fatigue will start.

Electrolysis also seems to play an important part in sucker rod failures. Cases have been cited where mixed strings have been used in corrosive wells and while one composition has failed badly this apparently unsatisfactory analysis has given excellent service when used alone.

This phenomenon is attributed to the fact that

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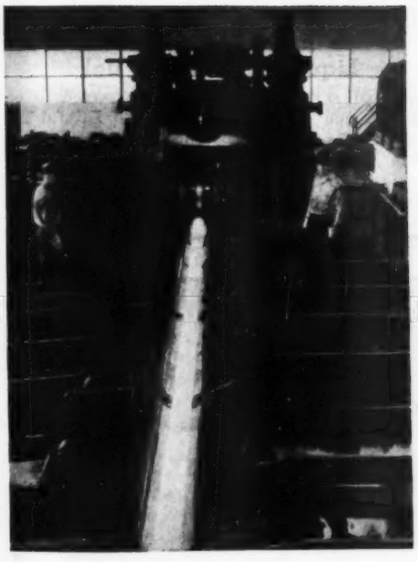

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appreciable potential differences may exist between slightly dissimilar alloys when immersed in an electroyite such as is found in oil wells. Thus, one rod may be protected at the expense of its neighbor, which because of composition may be slightly more electro-negative.

The above reason cannot be cited as the cause for all sucker rod failures but sufficient laboratory data is available to indicate that electrolytic attack should be considered when making up strings of various types of rods.

The above cases are with a few exceptions representative ones. There are some cases where a reverse comparison can be made and results are erratic and it seems to be impossible to determine the cause. The cause for these mysterious failures might be determined if more complete information were available.

In the manufacture of steel, we have installed at our plants an observer system, which I will describe briefly. The observers are generally wide-awake, trained men who report directly to the plant metallurgists. At the open hearth they inspect the raw material going to the furnace, observe the slag control, take the tappings temperature as the metal leaves the furnace, and from this accumulated data the proper pouring temperature is determined. They inspect the ingot molds to be sure they are perfectly clean and no dirt is on the stools. They follow the steel through the mills, checking heating furnace temperature, also observing how the steel rolls. After the steel is finished, inspectors, reporting to the chief inspector, who in turn reports to the plant metallurgist, inspect all the steel and are responsible for passing or rejecting same. The department superintendent has no authority over these men, although they co-operate very closely with him and the observer's records are absolutely unbiased. Furthermore, they record in minute detail the slightest irregularities in any of the operations from raw material to the finished product. These records are extremely valuable in solving problems which were "mysteries" during the years before this system was inaugurated.

I am strongly of the opinion, if all oil producing companies would install a similar system many of the rod "mysteries" would be solved. If they would delegate a neutral department of observers not reporting to the operating department, but the engineering department, and covered 24 hours, day in and day out, I believe many causes for failure would be found in the field, which could be remedied and considerably longer sucker rod life obtained. Shutdowns would be reduced to a point where the observers would not only save their salaries but considerable additional savings would be made. The one point to be stressed in such a system is that the operating departments and the observers should co-operate to the fullest extent and that the observers should not be considered policemen. The moral effect of having observers would make the pumpers be more careful in handling rods, balancing pumps and eliminating all the irregularities. We have found this feature to be true in our industry and our operating departments are so well pleased with the assistance and information gathered by the observers that they would not agree to have this system discontinued.

If an oil company had a year's record of all details in a certain field, very valuable data would be collected which would be of considerable benefit to the entire oil industry and also beneficial to the rod producers and steel manufacturers. I sincerely believe, if the service and handling records were kept, there would be but few cases of unsolved reasons for breaks. If failures can be found to be due to metallurgical causes the manufacturer can remedy this.

One large oil company in Mid-Continent was having an average of 60 breaks per month in one of its fields and then went to a lot of trouble studying field abuses and even had moving pictures taken of the crews mistreating the rods. After accumulating all the information, a meeting of all the field men was called and the pictures were shown. The company then printed a set of rules on how the rods must be handled and any man violating a single rule was subject to dismissal. The result was that the rod breaks thereafter averaged only nine per month as compared to 60 before the rules were put into effect. This illustrates what can be accomplished by a close follow-up in the field.

Hydrogen embrittlement, as mentioned earlier, in the bad sulphide wells also contribute to the short life of rods. I was told of an authentic case where rods taken out of a bad sulphide well in Kansas were so brittle that some of them broke

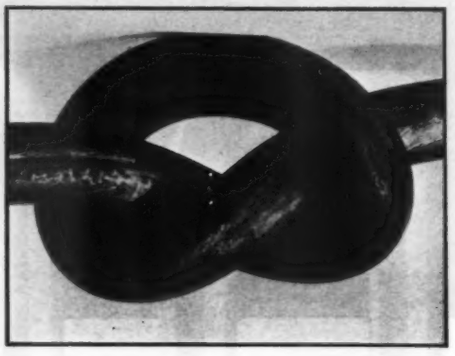


Fig. 4—In spite of the toughness of this rod as shown by laboratory results it failed to give good service in corrosive wells

in being laid down on the platform. Pieces of these rods were readily broken by fastening them in a vise and giving them a light blow with a hand hammer. A California oil representative happened to be at this well on this particular occasion and took some pieces West with him. About three weeks after the rods were removed from the well he wanted to demonstrate this brittleness to his associates in California. He put a piece of rod in a vise and a light blow with a hammer did not break it. He then gave it many hard blows and only succeeded in bending it 180 degrees without breaking. In the three weeks interval from removal from the well to the time of the demonstration the hydrogen had worked out of the steel and its toughness was restored.

I have often thought more life could be obtained from rods working in hydrogen sulphide wells if they could be removed at certain intervals, say once a month, and given a low annealing or even heated over a wood fire. This will remove the hydrogen and give the rods a fresh start. Long-time aging in the sun will accomplish the same purpose, but the heating operation is quicker and more certain.

The above is a brief review of the sucker rod problem and is being offered with the hope that some ideas may be obtained from these observations which will be of some benefit toward reducing rod failures. I would again like to stress the importance of complete records made by wide-awake observers as a means for increasing sucker rod life and for solving causes for failures which cannot be attributed to metallurgical causes or mechanical faults in the rods as manufactured.

California A.P.I. Chapters

The Los Angeles Basin Chapter of the American Petroleum Institute issues a cordial invitation to all oil men to attend its next regular meeting on Tuesday evening, September 10, in Shell Oil Co. Recreation Hall, corner of Hill and Obispo Streets, Long Beach. The program will include a model show of producing and drilling equipment, and the following talks: "Economics of Pumping Well Production," by Bruce H. Robinson, of the General Petroleum Corp. and "Application of Electricity in Drilling and Production," by H. C. Hill, of the General Electric Co.

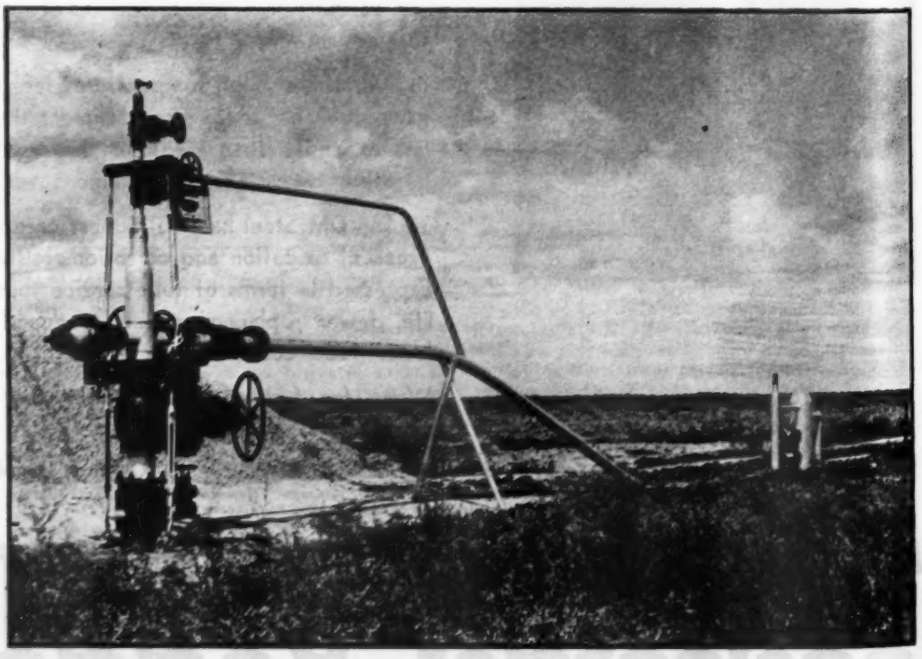
The San Joaquin Valley Chapter will meet on Tuesday evening, September 17, in the Recreation Hall of the Standard Oil Co. camp in Taft.

Chemical Industry Exposition

The Fifteenth Exposition of the Chemical Industry will be held during the week of December 2 to 7, 1935, at the Grand Central Palace, New York City. The exposition will cover not only the field of raw materials and production machinery, but will have sections devoted to materials handling, packing, bottling, labeling, up to the final marketing of the chemical industrial products of every type. A feature of the week will be the presentation of an award to the company which has contributed the most meritorious advance.

Liquefied Gas as Fuel

Marked saving in gasoline is expected to be made through the use of compressed natural gas as a fuel for motor cars and tractors in Soviet Russia. Equipment for filling tanks with this fuel is reported to have been installed at several points in Dniepropetrovsk Province, the Ukraine.



Characteristic christmas tree hook-up with lead lines used in the shallower sand gas wells in the Agua Dulce Field, of Nueces County in Southwest Texas

Efficiency of Oil Field Boilers May Be Increased by Treating Feed Water

By I. F. BINGHAM
University of Oklahoma

In this article Mr. Bingham classifies boiler compounds used in water softening and the chemical reactions involved. He also gives a thorough description of the lime-soda-alum method of water softening. The soap solution test for hardness is explained and the results of the tests interpreted. Also included in this last article is a discussion of the theories that have been advanced to explain the causes of caustic embrittlement.

ONE METHOD OF TREATING oil field waters is the use of patented treating compounds injected into the water, usually at the feed water pumps. Some operators vary the process by preheating in conjunction with the use of solvents. Boiler compounds offered for sale under trade names may be classified as sodium compounds; sodium mixed with organic substances, usually some form of tannin; organic substances without tannin; barium compounds and compounds containing castor oil (anti-foaming); mechanical acting compounds; and inert materials.

Water softening with boiler compounds may be necessary at times, but should not be recommended as a permanent method for removing solids from oil field waters. If boiler compounds are used, they should be used under the direction of a competent operator capable of mixing the compound from crude chemicals and with a complete analysis of the water at hand. Using boiler compounds in the absence of expert supervision is dangerous and expensive because of the complications which may arise. For example, the boiler compound may successfully reduce water hardness, but may also promote corrosion, foaming and priming, or caustic embrittlement. In general, the most undesirable features attending the use of boiler compounds lies in the fact that solids removed by the treatment are precipitated within the boiler, resulting in a rapid formation of scale and loss of heat energy due to the frequent "blowing-down" to remove the precipitated solids. Quite often, and this is particularly true where water high in dissolved $CaCO_4$ is being treated, the reaction taking place within the boiler results in excessive corrosion as well as a rapid formation of hard or sulphate scale. In conclusion, it may be stated that boiler compounds should be resorted to only when there is no other solution for the problem.

The effectiveness of the lime-soda-alum process of water softening depends to a large extent upon the insolubility of calcium carbonate ($CaCO_3$) and magnesium hydroxide ($Mg(OH)_2$). When the proper amounts of lime (CaO) and soda ash (Na_2CO_3) have been added the insoluble carbonate of lime and the hydroxide of magnesium are formed, and the hardness, both temporary and permanent, is removed.

When lime (CaO) is added to water, calcium hydroxide is formed:

$$CaO + H_2O \rightarrow Ca(OH)_2$$

Calcium hydroxide is commonly called "milk of lime." When "milk of lime" is added to raw water temporary hardness is removed according to the following reactions:

$$Ca(HCO_3)_2 + Ca(OH)_2 = 2CaCO_3 \downarrow + 2H_2O$$

$$Mg(HCO_3)_2 + Ca(OH)_2 = MgCO_3 + CaCO_3 \downarrow + 2H_2O$$

In practice a slight excess of lime is added to insure the precipitation of magnesium carbonate ($MgCo_3$) when present:

$$MgCO_3 + Ca(OH)_2 = Mg(OH)_2 \downarrow + CaCO_3$$

Soda (Na_2CO_3) or "washing soda" removes the permanent hardness by the following reactions:

$$CaSO_4 + Na_2CO_3 = Na_2SO_4 + CaCO_3 \downarrow$$

$$MgSO_4 + Na_2CO_3 + Ca(OH)_2 = Na_2SO_4 + CaCO_3 \downarrow + Mg(OH)_2$$

The nitrates and chlorides of calcium are removed by the following reactions:

$$CaCl_2 + Na_2CO_3 \rightarrow 2NaCl + CaCO_3 \downarrow$$

$$Ca(NO_3)_2 + Na_2(CO)_2 \rightarrow CaCo_3 \downarrow + 2Na(NO_3)$$

The nitrates and chlorides of magnesium are removed as follows:

$$MgCl_2 + Na_2CO_3 + Ca(OH)_2 \rightarrow CaCO_3 \downarrow + Mg(OH)_2 \downarrow + 2NaCl$$

$$Mg(NO_3)_2 + Na_2CO_3 + Ca(OH)_2 \rightarrow CaCO_3 \downarrow + Mg(OH)_2 \downarrow + 2NaNO_3$$

When carbon dioxide is dissolved in water it forms carbonic acid (H_2CO_3). For this reason CO_2 is often called carbonic acid gas. In the lime-soda ash treatment the gas is removed by the following reaction:

$$H_2CO_3 + Ca(OH)_2 = CaCO_3 \downarrow + 2H_2O$$

Alum or $Al_2(CO_4)_3$ is beneficial as a coagulating or agglomerating reagent, which causes the dispersed insolubles, such as chalk and silt, to collect in mats or flocs of sufficient size to settle out. It is particularly advantageous to use a coagulent when the plant is overloaded or when the raw water contains suspended solids.

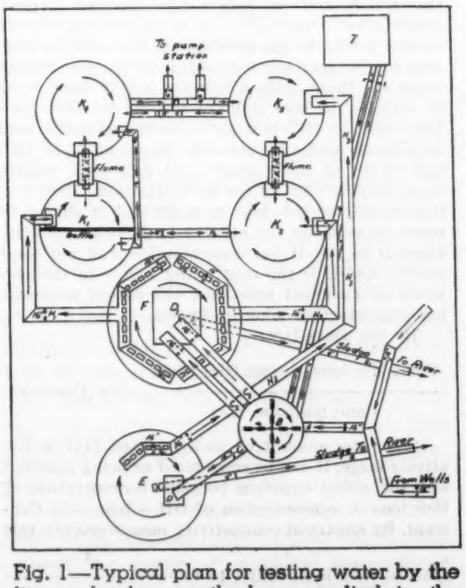


Fig. 1—Typical plan for testing water by the lime-soda-alum method as applied in the Oklahoma City Field

Where the chemical analysis of the raw water shows most of the scale forming salts as water hardening salts, the soap solution test for hardness will usually be sufficient for control testing of the raw and treated sample. The test may be carried out as follows:

Place 58.3 cc. of water in a 4-ounce oil sample bottle or other convenient bottle; etch the bottle at the water level. Set up a burette for the purpose of measuring standard soap solution. To make the test, fill the bottle to the etched mark; add the soap solution from the burette in small quantities, shaking well after each addition. The test depends upon the soap-destroying ability of calcium and magnesium salts. As soon as the calcium and magnesium salts have been eliminated, any additional amount of soap solution will produce a lather. Most operators agree the hardness has been eliminated when the lather stands one-half inch in height for a period of five minutes. Usually one-half cc. is deducted as a suds factor or distilled water factor.

Example: Suppose 58.3 cc. of raw water require 6.5 cc. standard soap solution to produce a good suds. The hardness would then be represented as 6 grains per gallon. If it is necessary to add more than 10 cc. soap solution to 58.3 cc. raw water it is desirable to dilute the raw sample with distilled water because where excessive amounts of soap solution must be added to break the hardness, the endpoint is obscured in the presence of magnesium. For example, suppose the water hardness to be 20 grains per gallon. Dilute the 58.3 cc. raw water with 116.6 cc. distilled water and use 58.3 cc. of the diluted water. It would now require 6.83 cc. to produce a lather. The hardness would now be calculated (3×6.83)—.5= 20 gr./gal. The factor "one" will have to be adjusted if the concentration of the soap solution varies or if the volume of the sample varies from 58.3 cc. This test should be applied to both raw and treated water at regular intervals of one or two hours.

Standard calcium chloride solution. Dissolve 0.2 gram of pure calcite (calcium carbonate) in a little dilute hydrochloric acid, being careful to avoid loss of solution by spattering. Evaporate the solution to dryness several times with distilled water to expel excess of acid. Dissolve the residue in distilled water and dilute the solution to 1 liter. One cc. of this solution is equivalent to 0.2 mg. of calcium carbonate.

Methanol (wood alcohol free from oil or other denaturant) may be substituted for grain alcohol (ethanol) in preparing the soap solution. For preparation of a small volume, dilute 500 cc. of methanol with an equal volume of distilled water: the solution must be free from opalescence. Add 12 g. of shredded dry white Castile soap; shake to dissolve; stopper, and store in a refrigerator for 24 hours. Siphon off the clarified solution, or filter through glass wool. Dilute with 50 per cent methanol in accordance with the results of titration.

Dilute 20 cc. of the calcium chloride solution in a 250 cc. glass-stoppered bottle to 50 cc. with distilled water which has been recently boiled and cooled. Add soap solution from a buret, 0.2 or 0.3 cc. at a time, shaking the bottle vigorously after each addition, until a lather remains unbroken for five minutes over the entire surface of the water while the bottle lies on its side. Then adjust the strength of the stock solution with 70 per cent alcohol (or methanol) so that the resulting soap solution will give a permanent lather when 6.40

of it is properly added to 20 cc. of the standard calcium chloride solution diluted to 50 cc. Usually 75 to 100 cc. of the stronger stock solution are required to make 1 liter of standard soap solution.

The amount of chemical to be added per 1,000 gallons of water may be arrived at by the cut and try method. That is, by increasing or decreasing chemical according to the indications of the soap solution test. If, however, it is desired to calculate the amount of chemicals on the basis of the chemical analysis of raw water, the following rules will apply*

1. The sum of the free and half-bound CO_2 (expressed as parts per million) multiplied by 0.0106 = pounds of CaO (lime) per 1,000 gal. necessary to absorb the free and half-bound CO_2.

2. Total magnesium (expressed as parts per million) multiplied by 0.019 = pounds of CaO per 1,000 gal. necessary to precipitate the magnesium.

Soda ash required (pounds of Na_2CO_3 per 1,000 gal.) to remove noncarbonate hardness is computed as follows:

Noncarbonate hardness (expressed in parts per million) minus the quantity of noncarbonate hardness that it is desired to leave in the water, multiplied by 0.009 = pounds of Na_2CO_3 required per 1,000 gal.

It is customary in the operation of softening systems to add a slight excess of soda over the amount which is theoretically required for the reaction in order to insure removal of the noncarbonate hardness. The amount of excess soda used should be controlled carefully since concentration of these salts will result in foaming. Also the addition of unnecessary soda adds unnecessarily to the cost of treating.

For clearness, the lime-soda-alum method of treating water in one of the Oklahoma oil fields is herewith presented. Referring to Figure 1, the untreated water from the 16-inch main (A) enters (B) directly below (x) and (y). The agitator tank (1,000 bbls. capacity) is equipped with a revolving agitator (bb). This is made of vertical paddles built around a central shaft. This shaft is driven by a small electric motor which is housed above the tank. Here the water is thoroughly mixed with the chemicals, and as the tank fills to the top, the water flows out through 16-inch overflow pipes (C_1, C_2, C_3) into tanks (E, 5,500 bbls., and F, 10,000 bbls.). These lines extend to the bottom of the tanks and discharge the water within baffle boxes (D, D_1). As the water rises in these two large tanks, the soda ash, lime and alum solutions react to precipitate the impurities within the baffle boxes, and to some extent over the area of the tank bottoms outside the baffle boxes. From these settling tanks, the precipitated sediments are drawn off through 4-inch slotted drain pipes (Z, Z_1). These drains are opened at regular intervals as the sediments collect.

As the water rises in tanks (E) and (F), it becomes relatively clear, depending upon the degree of subsidence permitted by various treating rates.

From tanks (E) and (F) the clear water overflows into 16-inch pipes, (G_1) and (G_2), perforated at the top. The water is drawn from the top in this manner in order to minimize agitation and allow a maximum amount of time for subsidence of the precipitated solids.

From this point the water flows through (H_1), (H_2) and (H_3) to tanks (K_1, K_2, K_3), respectively. These tanks are connected by equalizing manifolds (P_1 and P_2), which mantain an equal water level in all the tanks and near the top. Auxiliary flumes take care of the contingency arising from the inability of the 8-inch lines to care for maximum flow between the smaller tanks.

The 8-inch manifolds at (R) and (S) connect tanks (K_3) and (K_4) midway between top and bottom, permitting the line to the pump station to draw from one or both of these tanks at any time. The multiple stage pumps take suction from these tanks and discharge the treated water into the 6-inch and 8-inch field lines at 250 lbs./sq. in. pressure. This treating plant has a capacity of 260,000 gallons per day, reducing hardness from 26 to less than 3 grains per gallon.

*Boiler Feed Water Purification, Powell; McGraw-Hill Book Co., N. Y.

In conjunction with any water conditioning process it is necessary to conduct routine plant tests which may serve as a guide in determining the daily efficiency of the conditioning system and in forecasting types of trouble which may result from under treating or over treating. Note: Standard tests may be had by referring to The Boiler Feed Water Studies Committee, A.S.M.E. Joint Research Committee Report on Boiler Feed Waters, 1933.

The alkaline salts usually present in raw or treated water consist of carbonates, bicarbonates and hydrates. One or two of these forms of alkalinity may be present in the raw water where they may be occasioned by a change from one form to another during chemical treatment or under the influence of heat. To make a total alkalinity test place 100 cc. of the sample to be tested in a clean porcelain evaporating dish, add 2 to 4 drops of methyl-orange indicator and stir with a glass rod. The color of the water after adding the indicator will be yellow if the water is alkaline and red if the water is acid. When the water is alkaline add 1/50 Normal sulphuric acid (N/50 H_2SO_4) drop by drop from a burette that is graduated to read in tenths of cubic centimeters, stirring the water after each drop of acid is added. When the color changes from yellow to a faint pink, read the number of cc. of acid used in titrating. The parts per million alkalinity is equal to the number of cc. of acid used times 10. (Designated as M alkalinity.)

Place 100 cc. of the sample water in a porcelain evaporating dish and add 2 to 4 drops of phenolphthalein indicator, later referred to as P. If the color of the water remains white after adding indicator P the total alkalinity is in the form of bicarbonates. If the water turns red after the addition of indicator P add N/50 H_2SO_4 until the sample changes from red to white. Then P alkalinity equals the number of cc. of acid used times 10. The various forms of alkalinity may now be calculated from the accompanying table:*

FORMULAS FOR COMPUTING THE VARIOUS FORMS OF ALKALINITY PRESENT

	Bicarbonates	Carbonates	Hydrates
P=0	M	0	0
P less than ½ M	M—2P	2P	0
P=½ M	0	2P	0
P greater than ½ M	0	2(M—P)	2P—M
P=M	0	0	M

H-ion concentration reveals the active acidity or alkalinity of a solution. A knowledge of the active acidity or alkalinity of oil field waters is important to properly controlled conditioning of water. For example, a knowledge of the active acidity or alkalinity would enable an operator to control corrosion on the one hand or possibly caustic embrittlement on the other hand.

While titration might be used to find the total acidity or alkalinity, this method does not indicate the actual H+ or OH— concentration present under given conditions. It is known that active acidity is due to the presence of H+ ions in solution, acidity increasing as H+ ions increase. Strong acids are those acids which are highly dissociated in solution to give a large number of H+ ions. For example, HCl is a strong acid and acetic acid is a weak acid. In titration 10 cc. of N/10 HCl and 10 cc. of N/10 acetic acid will each require 10 cc. of N/10 NaOH for neutralization. However, the number of H+ ions in N/10 HCl is almost 70 times as great as the number in N/10 acetic acid. Since it is the H ion concentration and not total acidity which is the controlling factor in the majority of chemical reactions, the actual hydrogen ion concentration must be known.

By the mass law:

$$\frac{\text{Conc. H+ ions} \times \text{conc. OH— ions}}{\text{Conc. undissoc. } H_2O} = \text{a Constant}$$

Since the amount of undissociated H_2O is relatively large, it can be considered as being constant and the above equation becomes concentration of H+ ions × concentration of OH— ions = a Constant. By electrical conductivity measurements. this constant has been found to be $\frac{1}{100{,}000{,}000{,}000{,}000}$ or 10^{-14} at 21° C. Since in pure distilled water the H+ ions equals the OH— ions each must have a concentration of 10^{-7}.

*Powell, Boiler Feed Water Purification, p. 314.

Since pH value is determined from the logarithm of the reciprocal of H+ ion concentration it follows that a solution having a pH value of 3 is 10 times as acid as a solution having a pH value of 4, and 100 times as acid as a solution having a pH value of 5.

pH values may be taken by measuring a potential difference between the two electrodes which form the extremities of the gas chain, or by the use of a colorimetric comparator method.

In the comparator method 10 cc. of water to be tested are placed in a test tube and one-half cc. of a prepared dye indicator is added. This sample is allowed to stand for five minutes and the color produced is matched against one of the color standards which have been prepared by the same indicators. This method is accurate within one-tenth of one unit of pH value.

Caustic embrittlement may be defined as intercrystalline cracking of boiler plate while the boilers are in service. The term is used to distinguish between this type of failure and a special type of failure resulting from corrosion cracking of boiler plate under stress.

Failures of this nature are manifested by fine cracks in the metal occurring below the water line. The fine cracks produce a brittleness of the metal usually at the areas adjacent to joints.

Two theories have been advanced to explain the causes of the trouble. Some investigators attribute the phenomenon to improper processing of the metal used or to stresses set up at localized points due to the method of fabrication. These investigators maintain that the necessary concentration of caustic soda (the salt which has been named as the offending member) may not be carried to a point where the metal is so affected.

The advocates of the theory of caustic embrittlement ascribe the phenomenon to intercrystalline absorption of nascent hydrogen released by the decomposition of caustic soda. Evidence indicates that this embrittling action takes place at high pressures and temperatures and in the absence of other salts, principally sulphate or when these other salts are present in low concentrations.

Available evidence indicates that hydrogen acts in three ways to produce brittleness: (1) Temporary brittleness is caused by absorbing hydrogen (as in acid pickling); (2) it acts to reduce oxides; (3) in reducing iron oxides intercrystalline volumes are increased due to the formation of water. This increased volume creates a stress which, added to those already present, may produce cracking of the metal at points of maximum stressing.

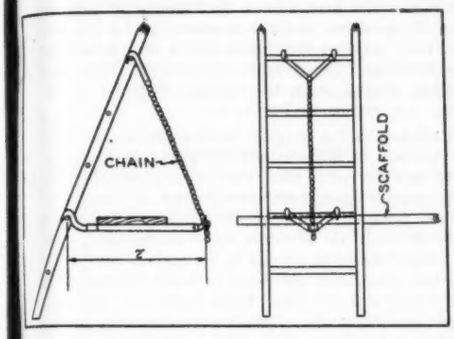
Regardless of which theory is correct, evidence tends to point to the fact that high concentrations of Na_2CO_3 may hydrolize at boiler pressures and temperatures to form NaOH, which, having a solubility of 339 grams/100 cc. of water and an equivalent specific conductivity of 203.4 produces a condition under which caustic embrittlement is most noticeable. It is therefore advisable to reduce excess sodium carbonate and hydrate, or to at least maintain well defined ratios between the sum of carbonate and hydrate of sodium and the sulphate present in the water. The rule generally accepted is: (1) For boiler pressures below 150 lbs./sq. in. the combined carbonate-hydrate to sulphate ratio should not exceed 1; (2) for boiler pressures between 150 and 250 lbs./sq. in. the combined carbonate-hydrate to sulphate ratio should not exceed one-half; (3) for boiler pressures above 250 lbs./sq. in. the combined carbonate-hydrate to sulphate ratio should not exceed one-third.

In conclusion it is emphasized that those charged with the responsibility of water conditioning should develop a habit of careful observation. Because of the complexity of operating conditions and the widely varying nature of waters, conditioning cannot be reduced to universally applicable rules. Unique problems will present themselves in such fashion as to require painstaking investigation and experimentation upon the part of even the most experienced operators. The above treatment is intended to deal only with the most widespread water problems of semipermanent systems peculiar to the oil fields.

OPERATING IDEAS

Adjustable Hooks

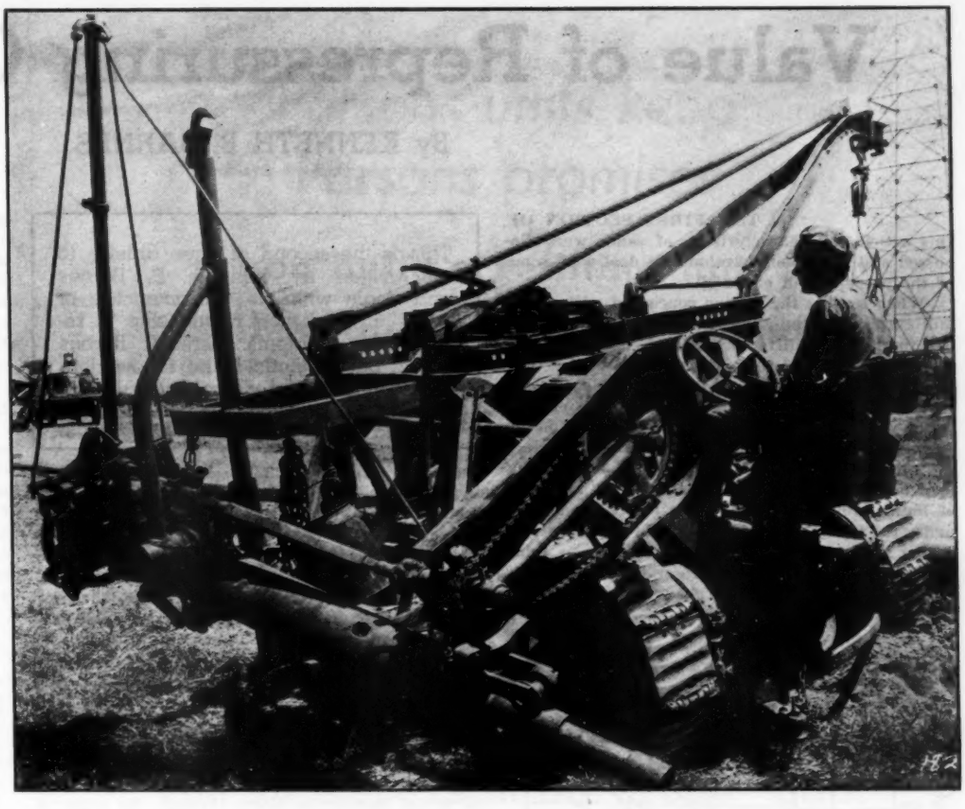
Lightness, flexibility and safety feature the ladder hooks devised in a Mid-Continent refinery. The appliance consists of a set of two hooks, connected by a chain, for each of two ladders and are used as shown in the sketch, the hooks fastening over the rungs of the ladders and a scaffold resting



on the straight arm of the bottom hook. This scaffold will easily support two men while doing light work such as painting, wiring, or insulating. The ease with which the scaffold may be moved along the line of work as it progresses constitutes a considerable saving in time.

Rollers Aid Welder

It is now common practice to weld the tool joint to the drill stem used in rotary drilled wells. The welders have developed different methods of handling the joints and pipe and the one shown in the accompanying picture is quite satisfactory. The pipe is racked and upon two of the horizontal members making up the rack small rollers are mounted. The frame supporting the rollers tapers so the pipe can be readily rolled up to the small wheels upon which it rests while the welder does his work. An electrode is attached to one end of the pipe and the joint turned by the use of a small chain tong manipulated by the welder with his left hand while the welding rod is held in the operator's right hand.

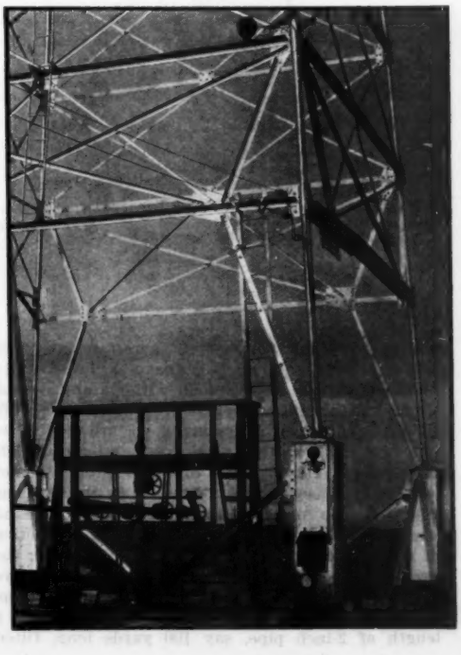


Screws Pipe With Device on Tractor

A Kansas pipe line contractor has attached to his tractor a chain driven pipe screwing machine, which will handle up to 6-inch pipe, and is driven from the winch on the opposite side of the tractor. On the top framework is mounted a four-speed transmission that controls the speed of device. This is adaptable for surface water lines or gas lines servicing drilling rigs. The attachment does not interfere with operation of the tractor. This device has also been used for boring road crossings where small pipe is to be laid.

Warning Is Sounded When Pressure Increases Rapidly

In the Big Lake Field of Texas many of the deep wells develop up to 1200-lb. pressure. This pressure often builds up so rapidly the safety valve on the separator releases or, if not, the safety plug will blow. This in turn results in a loss of oil and creates a fire hazard. To give warning of high pressure one company has attached a signal which is mounted 30 feet above the ground on the derrick, so that when the pressure reaches near the danger point this signal flashes a red light and sets off a loud siren which can be heard anywhere on the lease. This enables the lease man to quickly determine the well in distress and allows him to relieve pressure on the well without endangering himself. The signal is electrically operated and connects directly to a pressure gauge on the separator. Obviously, this arrangement is needed only when the pressures encountered may exceed the designed working pressure of the separator supplied for this service.



Crude Oil Characteristics Determine Value of Repressuring Operations

By KENNETH B. BARNES
Geologic Standards Co.

This is the second of three articles to be written by Kenneth B. Barnes and deals with the characteristics of crude oil and their relationship to repressuring problems. Here Mr. Barnes points out methods to be followed in studying crude oil characteristics. The first article appeared August 8, page 31

IN THE FIRST SECTION OF this article the characteristics of sands were discussed and this second section will deal with some of the properties of crude oil.

When leaving the section concerned with sands and turning to the subject of crude oil involved one fundamental difference is noticed between the two. Regardless of the analyses and studies that can be made of the sand, it is not possible directly to change its properties. Of course, some change can be made by shooting, by the application of hydrochloric acid if calcareous cementing materials are present, or even with hydrofluoric acid in the case of silica, but these changes usually are only of limited importance when the entire sand body under the lease is considered. While the properties of the sand per se cannot be changed, their relation to the sand body as a reservoir from which oil can be obtained can be changed by governing

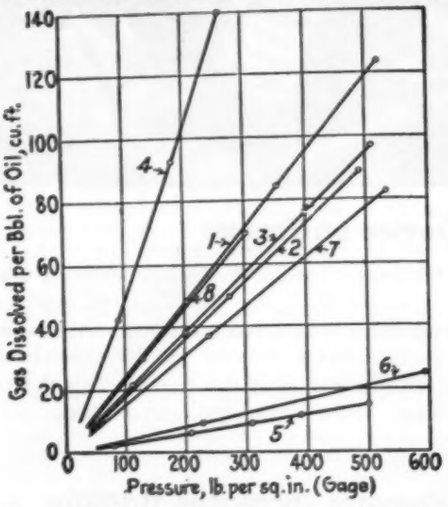


Fig. 1—Solubility of gases in crude under pressure at 70° F.
(Beecher and Parkhurst)

Curve 1. Natural gas No. 1 in Oklahoma crude oil—35.4° A.P.I.
Curve 2. Natural gas No. 2 in Oklahoma crude oil—35.4° A.P.I.
Curve 3. Natural gas No. 1 in Oklahoma crude oil—30.2° A.P.I.
Curve 4. Carbon dioxide in Oklahoma crude oil—30.2° A.P.I.
Curve 5. Hydrogen in Oklahoma crude oil—30.2° A.P.I.
Curve 6. Air in Oklahoma crude oil—30.2° A.P.I.
Curve 7. Natural gas No. 2 in Oklahoma crude oil—30.2° A.P.I.
Curve 8. Natural gas No. 2 in Bradford crude oil—44.3° A.P.I.

ANALYSES OF GASES

	No. 1	No. 2
CH_4	82 0	82 5
C_2H_6	10.6	5 5
CO_2	1 2	5 9
O_2	0.4	0 2
Res.	7.4	5.8

the well spacing and pattern arrangement. This will change the radius of drainage of the oil wells. This, of course, can be done without any consideration or thought of repressuring. Therefore, while in ordinary "natural" pumping we are limited to only one variable, that of well spacing, and which, if done too closely, will diminish profits faster than it increases total production, in repressuring there is the opportunity offered by a second variable, the crude oil. The addition or subtraction of a gas from solution in a crude will change the properties of the oil. Keeping in mind the two variables, well spacing and crude oil, natural pumping and repressuring might be illustrated by a length of 2-inch pipe, say 100 yards long, tilted perhaps 3 degrees from the horizontal. Perhaps the pipe originally was filled completely with crude oil and dissolved gas, under pressure. Production from the lower end of the pipe, when first opened, can be likened to the flowing state of the well. The flow diminishes to a period representative of a stage of prolific pumping. Later the flow decreases still more. Perhaps we now could saw the pipe up into sections and obtain more oil, as could be done in the field by spacing more closely, to secure more natural production. But much saving may prove expensive. The pipe system, however, could be fitted with a compressor at the upper end, and gas forced in. Two things would be accomplished, first, the pressure gradient across the length of pipe would be increased, and more oil would literally be blown through, the same as if the pipe had been raised to a greater angle, and second, some of the gas would go into solution in the oil, change its properties and make it more amenable to flow and recovery.

The solubility of various gases in certain crude oil under pressure, as brought forth in the work of Beecher and Parkhurst, is shown in Figure 1.

The solubility of natural gas in crude oil is a function of temperature, as shown in Figure 2, from the same work.

Two important physical changes that are made in a crude oil as a result of solution of gas are in the viscosity and surface tension. Of course, the

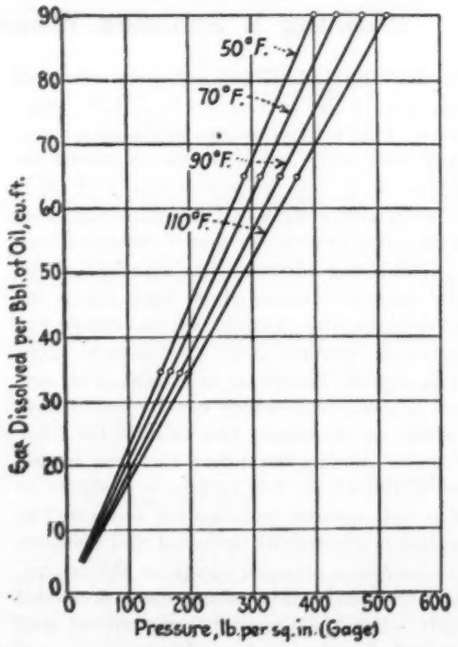


Fig. 2—Solubility of gas in crude oil at different temperature
(Beecher and Parkhurst)

amount of change depends upon the nature of the oil and the gas and the amount of gas dissolved, and it has just been shown that the latter depends upon the pressure and the temperature of the system. The "rate" of solution is also a very important consideration. The results of tests of Dow and Calkins, dealing with the change obtained in viscosity, are shown in Figure 3.

Changes in the surface tension of the oil with the solution of natural gas are given in Figure 4.

It can be seen that the results obtained by using natural gas, particularly that of the "wet" type, is decidedly more beneficial than when air is used. In fact, air alone in some crudes may alter the properties of the crude in an unfavorable manner, but sometimes air must be used because of a scarcity of natural gas. Even then, the injection of air may have the possibilities of benefit in imparting a blowing or dragging action on the oil

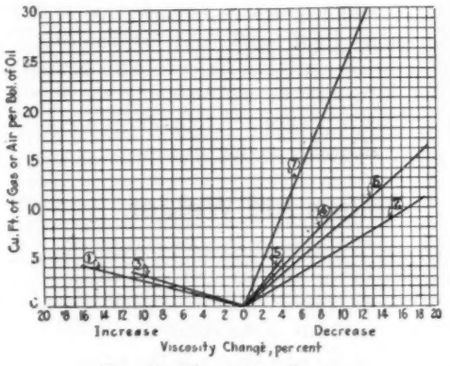


Fig. 3—Viscosity change
(Dow and Calkins)

Curves 1 and 2, air and natural gas in Wyoming crude, 550 sec. viscosity at 100° F. Curves 3 and 4, air and natural gas in California crude, 577 sec. viscosity at 100° F. Curves 5 and 6, air and natural gas in California crude, 284 sec. viscosity at 100° F. Curve 7, natural gas in Oklahoma crude, 68 sec. viscosity at 100° F.

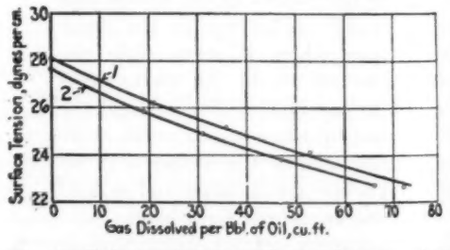


Fig. 4—Relation between the surface tension of crude oil and the volume of natural gas dissolved with oil under pressure at 70° F.
(Beecher and Parkhurst)

Curve 1. Oklahoma crude oil—34.4° A.P.I.
Curve 2. Oklahoma crude oil—30.1° A.P.I.

and help move it to the oil wells. Naphthenic crudes will oxidize much more than paraffinic crudes.

It is thought that the blowing or frictional effect of the gas or air on the crude, quite aside from altering the viscosity or surface tension, is a very important part of the repressuring process. In this sense repressuring could better be termed as gas- or air-driving, in as much as the gas or air tends to drive the oil through the sand to the well. Bypassing and channeling of the gas through the oil occur, of course, in the individual pore channels and the operator must determine for himself what volume-rate (mass velocity) is most efficient and economical for his system.

Tentative Program for Meeting American Welding Society

A tentative program for the fifteenth fall meeting of the American Welding Society, September 30 to October 4, at the Palmer House, Chicago, follows:

Monday, September 30

1:45 p.m. Introduction of president of American Welding Society by D. C. Wright, chairman, Chicago section.

2:00 p.m. Presentation of Miller Memorial Medal award.

2:30 p.m. Presiding officer—J. J. Crowe, president. "Bridge Welding—A Review of the Literature," by F. H. Frankland, vice chairman, committee to study welding of highway and railroad bridges. "Nitrogen in Metallic Arc Weld Metal," by Dr. J. W. Miller, Reid Avery Co.

6:30 p.m. Dinner meeting, board of directors, Palmer House.

Tuesday, October 1

9:45 a.m. Presiding officer—John Cornelius Penn, dean of engineering, Armour Institute of Technology. Fundamental Research in Welding: "Spot Welding Problems," by J. H. Zimmerman, Massachusetts Institute of Technology. "Bend Testing of Welds—A Summary," by M. F. Sayre, Union College. "Advantages of Welding in Continuous Structures," by Inge Lyse, Fritz Engineering Laboratory, Lehigh University.

2:00 p.m. Presiding officer—C. A. Adams, director, American Bureau of Welding. "Arc Welding with Pure Iron Welds," by Gilbert E. Doan, Lehigh University. "Investigations of Residual Stresses," by R. E. Jamieson, McGill University. "Low Temperature Tests of Welds," by Otto Henry, Brooklyn Polytechnic Institute. "Creep Tests of Welds," by N. F. Ward, University of California.

7:30 p.m. Palmer House. Conference and meeting of Fundamental Research Committee, American Bureau of Welding—H. M. Hobart, chairman, presiding. This conference is scheduled for the benefit of university research workers in the fundamentals of welding.

Wednesday, October 2

9:45 a.m. Presiding officer—D. C. Wright, chairman, Chicago section. "Tests to Determine the Feasibility of Welding the Steel Frames of Buildings for Complete Continuity," by W. M. Wilson, University of Illinois. "Welding All-Metal Radio Tubes," by M. L. Eckman, Thomson-Gibb Electric Welding Co. "A New General-Purpose Meter for Resistance Welding," by C. Stansbury, Cutler-Hammer, Inc.

2:00 p.m. Presiding officer—G. T. Horton, president, Chicago Bridge & Iron Works. Symposium on Methods of Minimizing Distortion. Pressure Vessels, J. T. Phillips, Foster Wheeler Co. Repair Welding, George Hettrick, president, Anchor Welding Service, Inc. Light Gage Steel, J. H. Blaha, General Household Utilities Co. "Machine Torch Cutting and Fabrication of Tool Equipment," by P. H. Danly, Danly Machine Specialties Co.

Thursday, October 3

9:45 a.m. Presiding officer—Dr. W. M. Mitchell, Illinois Steel Co. Symposium on Low Alloy Steels for Welding Purposes. "The Development and Use of Low Alloy High Tensile Steels in Welded Construction," by A. E. Gibson, Wellman Engineering Co. "Welding of Alloy Steels," H. L. Miller, Republic Steel Co.; J. C. Holmberg, Struthers-Wells-Titusville Corp., and Corbin Chapman, Hedges-Walsh-Weidner Co.

2:00 p.m. Presiding officer—E. Vom Steeg, chairman, Meetings and Papers Committee. "Welding of Alloy Steels," by J. C. Hodge, Babcock & Wilcox Co. "Effect of Generator Characteristics on the Weld," by J. H. Blankenbuehler, Westinghouse Electric & Manufacturing Co. "Electrical Characteristics of the Welding Arc," by S. C. Osborne, Wilson Welder & Metals Co., Inc. "Resistance Welding of Copper Alloys," by I. T. Hook, American Brass Co.

7:00 p.m. Annual banquet, Palmer House.

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PROBLEMS FROM READERS

Edited by T. F. Smiley

Use of Hydrochloric Acid Suggested for Testing Florida Lime Cores

I would appreciate it if you would give me information as to the best way of recognizing moderate saturation in the limes into which we are drilling here in Florida. I use both ether and acid, but it has occurred to me there might be a better way to check quickly when the core comes out of the hole.—W. G. B.

For testing lime cores or cuttings for oil it is suggested that you use hydrochloric acid and dissolve the lime completely. If oil is present it will show as a film on the liquid. This is preferable to using solvents for there may be many resins in the Florida formations that might show an oily film, but not come from crude oil. This embodies the substance of the testing procedure, but for real accuracy the cuttings or cores should be taken to a well-equipped laboratory where determinations can be made with care and positive accuracy.

Estimating the Costs of Drilling and Equipping Wells in Michigan

Is it possible for you to give me information regarding the cost of drilling a well in the Mecosta County, Michigan, field to the Michigan stray sand? The depth to this sand is approximately 1,400 feet.—F. H.

The best this department can do is to give you an estimate. Estimated costs and actual costs sometimes agree fairly well. Often they don't. If you are planning to drill in Mecosta County, you should obtain definite quotations from some of the contracting drillers in that district.

It is assumed that the well will be drilled with cable-tool equipment, using steam power generated with natural gas fuel. The contract price for drilling the well would be approximately $2 per foot if in semiwildcat territory. For 1,400-foot depth this would represent an investment of $2,800, to which must be added water and fuel to be supplied by the operator at a cost of approximately $50 per day. It will require not less than 30 days to drill this type of well. So you will have to add $1,500, making a total of $4,300.

The equipment necessary to drill such a well would cost approximately $2,500 and the casing about $750 more. The equipment would consist of steel derrick, cable-tool steel front with samson post and walking-beam, bandwheel and bullwheel, all erected on location.

The foregoing would aggregate about $7,325 and to this should be added at least 10 per cent for incidentals, making the approximate total more than $8,000.

More detailed figures may be of interest to you. For a cable-tool drilled well the following equipment (with estimated cost, subject to many variations) would be necessary:

Derrick and crown block	$650
Hauling, foundations and cleaning site	250
Drilling 1,400 feet at $2 per foot	2,800
500 feet of 10-inch casing	925
1,400 feet of 6⅝-in. casing	1,266
Water and fuel at $50 per day—30 days	1,500
	$7,325

To equip well if a producer:

Well-head connections	$250
1,400 feet of 2⅜-inch tubing	375
Oil and gas separator	300
Flow lines and surface connections	200
Two 500-bbl. steel lease tanks	800
Hauling, labor and miscellaneous items	250
	$2,175

When power is required to pump well:

40-H.P. gas engine, complete	$1,850
Steel front (samson post, beam, etc.)	1,400
Engine and belt house	350
Belting	180
Miscellaneous fittings	75
Cooling tank for engine water	200
1,400 feet of ⅝-in. sucker rods	200
Working barrel, complete	35
Miscellaneous items	100
	$4,390

Recapitulation:

Drilling	$7,325
Completing well (flowing)	2,175
For pumping equipment	4,390
	$13,890

The current cost of a well to the Dundee formation in Greendale and Porter Counties is about $14,000 and the depth is about 3,500 feet.

Readers are invited to send questions relating to drilling, producing and transporting operations. These questions will be placed in the hands of persons capable of answering them authoritatively. The names of those writing for information will be considered confidential, initials only being published. This department cannot undertake to answer questions involving patents or intricate formulas or those which properly should be submitted to consulting engineers or geologists.

WHY THEY CALLED IT *Stegocephalidae*

The geologist who explores the underearth for petroleum and other minerals says that among the first animals were a family of amphibians called stegocephalidae, which flourished about 200,000,000 years ago and had disappeared 125,000,000 years ago, according to Science Service. The name comes from two Greek words, one meaning roof and the other meaning head. Remains discovered show 90 species of this family, all elongated creatures with short legs and armored skulls having a small hole immediately over the brain. This hole, scientists assert, was occupied by a third eye, adding that all vertebrates at one time had three eyes. Rudiments of this third opening in the skull can be distinguished even now in the skull of man, indicating that our forefathers at one time had three eyes.

Conflicting Views Held by Oil Men About This Pumping Problem

At the request of a friend whose trouble was discussed with me, I am writing to ask about certain conditions involved in pumping an oil well through a tubing-packer of the straight type, or without any provided escape for gas through 1-inch pipe, or for entrance of air into well through the same inlet. The exact condition follows: A well, approximately 1,500 feet in depth, cased with 6-5/8-inch casing, developed a leak in the casing at some point, and, being a very small leak, the owner decided that to save this well he would run a string of tubing with working-barrel and standing-valve regularly inserted. The barrel was placed at the top of the sand and a space of a few feet was left between top of barrel and base of packer. The anchor was about 15 feet long with perforations a foot or so under the barrel. There was a 3/4-inch gas anchor five feet long screwed into the standing valve. The well, after first pumping, showed that apparently the packer had not shut the water off; so the tubing was lowered and that fault was overcome by the packer setting and shutting off all salt water but when the water was exhausted the well would no longer pump. Rods were pulled but the cups were not injured and the valve appeared to be clear. Again, on trial, the well refused to pump. At no time in the years of operating this well was there any gas to speak of. The question is: Will a well pump under these conditions—air excluded, or in a partial vacuum? Some field men of the practical type say yes. Some say no.—J. B. M.

Engineering opinion obtained is that you have flooded your formation with accumulated water above the packer. This water, released into the hole, has entered the porous portion of the formation and cut off the oil. While the packer is shutting off water by making a tight seal between tubing and casing, air still can enter the bottom of the hole, so that the air pressure is equalized there. In other words, no partial vacuum is created. It must be stated in frankness that this is only an opinion, for several pertinent points of information are lacking.

Suppose we trace the path of this air entering into the hole below the packer. The upper end of the tubing is open. Air at atmospheric pressure therefore will fill the tubing down to the top of the traveling valve in the working barrel. On the up stroke that valve remains closed, so we will assume that air would not enter then, but when the direction of travel of the valve is reversed and it starts down the lower valve closes and any air between the two valves is compressed. This lifts the traveling valve. Air from the tubing would then enter and equalize pressure in the working barrel. On the up stroke the standing valve will not seat perfectly, so air will surround it and enter into the space below the gas anchor and fill the space below the packer.

You thus have normal conditions in the bottom of the well so far as equalized air pressure is concerned. The column of air 1,500 feet high is not of sufficient weight to exert any appreciable pressure against the formation, so fluid can enter if natural forces within the formation will fill the space in the bottom of the hole with fluid.

As you cannot pump fluid it would appear that oil is not entering the well. If water has flooded the formation it is probable that the face of the sand is closed and in the light of such facts as you give it is recommended that the well be treated to open the pores in the formation.

Various suggestions might be given as to best method of treating the formation, but without more details they would be in the form of guesses. You are advised to contact one of the reliable well treating companies and place all the details of your problem before its engineers.

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DEAN CORE DRILLS

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Cetene Number and Other Units for the Classification of Fuel Oils

Will you please advise us the method used to determine cetene number in Diesel fuel?—P. P. C.

The cetene number of a fuel oil has a meaning similar to the octane number for motor fuel. The octane number of a gasoline indicates the antiknock rating as found by trial under definite conditions in a standardized engine; the measure being fuel mixtures containing variable percentages of octane. A 70 octane number gasoline is one that matches a prepared mixture containing 70 per cent octane. Cetene number means the percentage of cetene in the reference fuel that has the same ignition characteristics as the oil under test. The cetene number of a fuel is determined by running it in a single cylinder variable compression engine under fixed conditions of speed, jacket temperature, etc., and comparing its ease of ignition against mixtures composed of two standard hydrocarbon fuels, one of which, cetene, ignites most easily, and the other, mesitylene, not at all. Enough trials are made with the oil and the several mixtures until a match performance is obtained. The percentage of cetene in the test mixture that equals the unknown oil fixes the cetene rating of the oil.

It will probably be of interest to mention other methods for rating Diesel fuel oils. The critical compression ratio, commonly expressed, C.C.R., is the lowest compression ratio at which firing will take place within three seconds in the test engine equipped with the turbulence chamber cylinder, at a speed of 600 r.p.m., fuel feed rate 9 cc. per minute, spark advance 12° minus top dead center, injection pressure 1,500 lbs. per sq. in., jacket temperature 212° F., and air inlet temperature 100° F.

$$\text{Becker's Diesel Index} = \frac{\text{Aniline point (° F.)} \times \text{A.P.I. gravity}}{100}$$

The correlation between cetene number and Diesel Index is thought to be close only when the percentage of cetene required is about 50.

The cetene numbers of American fuel oils vary from a maximum of about 60 to a minimum of approximately 30, although some special products will run outside these limits. A properly designed high-speed Diesel engine should run smoothly at all loads and speeds on an oil having a cetene number of 50, although some engines may run roughly under light loads even with a 60 cetene number fuel. Others will give a good showing with a 40 cetene number oil.

References: Ignition Quality of Diesel Fuels as Expressed in Cetene Numbers, G. D. Boerlage and J. J. Broeze, S.A.E. Jr., 31, Sec. 1, 282, 1932, (July). The Diesel Industry Has New Fuel Standards, Anon., Diesel Power, 12, 493, 1934.

Methods for the Determination of the Specific Gravity of Paraffin Wax

What method is used for finding the specific gravity of paraffin wax? A simple method is desired as we are interested only in making checks of several samples. A method that will give reasonably close results will do.—A. S. P.

The specific gravity of paraffin wax varies with the grade or melting point, which commonly ranges between 120° and 135° F., but waxes are known melting at 105° and 170°. Melting point determinations are the usual guides for grading paraffin wax.

The simplest method for determining the specific gravity is by means of a hydrometer. The wax is melted and while held in the liquid condition at a fixed temperature the observation is made. Then the observed specific gravity is reduced to 60° F. by means of the temperature correction table. If a specific gravity hydrometer is not available the A.P.I. instrument may be used for the observation and the conversion made by use of the standard tables.

Occluded air makes it difficult to obtain accurate specific gravities, so the preparation of the sample is important. The air should be removed by holding the wax in the liquid condition for a considerable period.

The weighing method consists in weighing the solid wax in air, then attaching it by means of a fine silk thread to a solid sinker. The weight of this sinker immersed in water at 60° F. is found, next the combined weight of the wax and sinker while attached and immersed in water at 60° F. The specific gravity is calculated from:

If W = Weight of the substance in air,
L = Its loss of weight in water,
S = Weight of sinker in water,
C = Combined weight of substance and sinker in water,

Then its specific gravity =

$$\frac{W}{L} = \frac{W}{W-(C-S)} = \frac{W}{W-C+S}$$

The specific gravities of several grades of paraffin wax were determined by Morris and Adkins, as reported in Ind. Eng. Chem. 19, 300, 1927. They found waxes melting from 103° F. to 127° F. to range in specific gravity from 0.8797 to 0.9250 at 60° F. A wax melting at 118.5° F. gave specific gravities from 0.78 at 130° F. to 0.906 at 60° F. Another specimen melting at 123.2° F. varied in specific gravity from 0.907 at 60° to 0.785 at 130° F.

These investigators made determinations by means of a modified Nicholson hydrometer and compared the results with those found with a spindle hydrometer. Some of these are shown in the table following.

SPECIFIC GRAVITY OF SEMIREFINED WAXES

Melting point (° F.)—	Nicholson hydrometer	Spindle hydrometer
103	0.8799	0.8053
109	.8840	.8044
118.5	.9057	.8091
123.2	.9070	.8110

These differences are not explained but the authors state that one wax at 130° F. gave the same figure, within a reasonable error, with the Nicholson instrument, the ordinary spindle hydrometer and a pycnometer.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit problems to Dr. C. K. Francis. Questions should give as much detail as possible. Inquiries must be signed but only the given initials will be printed. The source of questions is considered confidential. Questions requiring discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered in these columns

Crude Oil Importations Into Great Britain and Refinery Yields

We wish to know how much crude oil is imported into Great Britain and what products are obtained at the English refineries.—M. C. E.

The Customs Trade Returns for Great Britain reflects the importations and refinery yields for the years 1929 to 1934 inclusive. Some crude distillates are included as crude petroleum. The volumes given in the original tables are Imperial gallons and have been converted to approximate U. S. barrels of 42 U. S. gallons in Table No. 1.

TABLE 1—IMPORTS OF PETROLEUM

(Figures are millions. Gallons are Imperial. Barrels are U. S.)

	1929		1932		1934	
From—	Gals.	Bbls.	Gals.	Bbls.	Gals.	Bbls.
Iran (Persia)	339.7	6.74	232.5	4.62	216.5	4.29
Mexico	13 8	0.27	16.5	0.32	114.2	2.26
Peru	.....	....	45.0	0.89	82.5	1.64
Venezuela	64.7	1.28	66.5	1.32	23.5	0.47
Iraq	.....	....	.....	....	13.4	0 26
Trinidad	20.9	0.45	1.2	0.23	11.0	0.22
Ecuador	.....	....	.....	....	6.5	0.13
United States	.....	....	2 3	0.04	5.9	0.12
Straits Settlements	.....	..	.....	....	3.4	0.67
Rumania	0.7	0.01	.....	....	0.2	0.04
Colombia	47.5	0.94	.....	....	.....	....
Total	487.3	9.69	368.5	7.31	477.1	9.49

The total quantity of crude oil imported showed an increase of nearly 22 per cent over the previous year. The outstanding feature of the above table is the large increase in imports from Mexico and the advent of Iraq oil. Although the pipe line from Iraq was operating only for the last few months of the year, 13.4 million gallons of crude oil were imported from that country.

The refineries charged the materials shown in Table No. 2. The shale oil is in addition to the imported oils.

TABLE 2—THROUGHPUT ENGLISH REFINERIES

(Millions of Imperial Gallons)

Oil—	1929	1932	1934
Crude oil	458.9	361.2	464.6
Refined and partly refined products	206.4	164.6	66.4
Shale oil	42.3	29.7	31.5
Total	707.2	555.5	562.5

While there was a substantial increase in the quantity of crude oil treated the total throughput of the refineries was not much higher than in 1933, the reason being that there was again a considerable decrease in the quantity of partly refined products submitted to treatment.

The yield of liquid products from the oil charged to the stills at the refineries is indicated in Table No. 3.

TABLE 3—REFINERY LIQUID PRODUCTS

	1929		1932		1934	
Product—	Gals.	Bbls.	Gals.	Bbls.	Gals.	Bbls.
Motor gasoline	167.7	3 33	159.3	3.16	144.8	2.88
Other gasoline	25.4	0.50	17.0	0.34	24.4	0.48
Kerosene	66.8	1.32	43.0	0.85	34.5	0.68
Gas oil	30.8	0.61	36.8	0.73	53.4	1.06
Lub oil	21.7	0.43	19.1	0.38	24.7	0.49
Fuel oil	286.9	5.70	159.1	3.16	133.4	2.65
Other liquids	5.0	0 10	5.3	0.10	0.1	0.02
Total	604.3	12.00	439.7	8 74	415.3	8.25

The proportion of the total local requirements of the most important liquid petroleum products has decreased in recent years. For the year 1931, 15 per cent of the quantity of motor gasoline consumed was produced in the English refineries. This was reduced to 7.5 per cent in 1934. The ratio for kerosene was 18.7 per cent in 1931 and 10.5 per cent in 1934; for gas oil the proportions were 31.9 and 18.2 per cent; for fuel oils, including Diesel oil, 32.9 per cent and 16.1 per cent respectively.

Southwest Texas District

NEW FIELD IN PETTUS SAND IS DISCOVERED IN BEE COUNTY

By GEORGE WEBER

SAN ANTONIO, Tex., Sept. 2.—An intensely active week in Southwest Texas resulted in the discovery of a new field in the Pettus sand and important extensions and new production in the fields of Hidalgo, Duval, Webb, Nueces and San Patricio Counties. Following the new production comes announcement of many new locations for outpost wells in several of the fields.

In Bee County, F. P. Hynes' No. 1 Plummer was brought in late in the week for a large gasser. The wildcat, in Section 33 of the F. J. Chessman Survey, about 3 miles south of the Caesar Field, was closed in without gauging. The top of the Jackson was struck at 1,875 feet and the Pettus was topped at 2,975 feet, with 16 feet taken in this sand. Drill stem tests showed only gas. After closing in the well, the pressure has built up to over 1,200 pounds. Considerable acreage surrounding the discovery of this latest Pettus production is held by Hynes, Magnolia Petroleum Co., Devonian Oil Co., California Co., Charles Daubert and H. H. Coffield. No new locations have yet been announced.

The Caesar Field added another producer in Luling Oil & Gas Co.'s No. 2 Maley, making 265 bbls. per day through a three-sixteenths inch choke. In the Dirks Field in the same county, one producer was completed and one dry hole abandoned. No. 1 Harris test of Circle Oil Co., in Ab. 1.210, J. L. Dugat Survey, topped the Pettus sand 120 feet low at 3,993 feet and tested salt water. This is the first dry hole in the field, and its location a short distance southwest of four good producers shows a fault in that section of the field. Two good wells were added to the North Pettus Field, one in Karnes County and the other in Goliad County. Grisham's No. 1 Ausberger, wildcat about 1 mile east of Tuleta, was abandoned, having tested salt water.

Hidalgo County

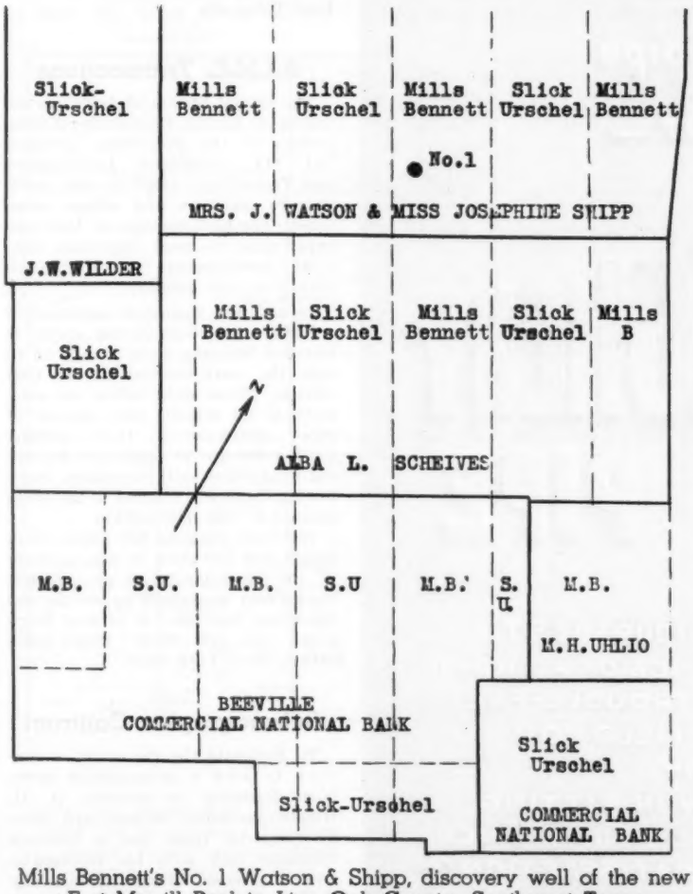
Hidalgo County staged a comeback from its recent slight let-down, with significant extensions to the Mercedes and Samfordyce Fields. Nearly as much interest was shown in the completion of United Sulphur Co.'s No. 1 American Rio Grande Land & Irrigation Co. as was incited by No. 3 discovery itself. When the well was brought in the first of the week, it made 25 bbls. per hour of black, 46 gravity crude, differing sharply from the dark green 58 gravity crude from the discovery well. The gravity increased to about 51 degrees later in the week. Although the producing sand occurs at 7,490-97 feet, approximately the same depth as that in No. 3 well, operators believe it to be a different sand.

The well is 1¾ miles northeast of the discovery well, about 9 miles north of Mercedes. In the field, Union Sulphur's No. 4 American Rio Grande, 1½ miles southeast of No. 3 is coring below 7,540 feet, not having yet encountered the sand. No. 5 well, 600 feet northeast of No. 3, is drilling at 5,290 feet.

Samfordyce Field

In the Samfordyce Field, outpost wells were completed extending the field 1,250 feet on the northwest and 500 feet on the northeast. Henshaw & Rothert's No. 1 Seabury, the northwest well, produced an estimated 75 bbls. of pipe line oil on a three-thirty-seconds inch choke from sand at 2,774-77 feet. This well is in Tract 258, Porcion 38. On the northeast, E. Powell's No. 1 Lula George in Tract 13, Porcion 41, was completed for 40 bbls. from sand at 2,752-61 feet. Gem Oil Co.'s No. 2-B Seabury, in the northwest part of the field, was completed for 70 bbls.

The recent extensions to the field have stimulated activity greatly to the northwest and northeast of the field. Skelly Oil Co. has staked three new locations offsetting Henshaw & Rothert's tract and extending over into Starr County. Henshaw & Rothert are skidding the derrick to No. 2 location in the Seabury tract to begin the second well immediately. The new northwest outpost location is Barnsdall and Phillips No. 1 Yturria in the south end of the 110-acre lease, Porcion 100, Jurisdiction of Camargo, Starr County. Toward the east and northeast, Harrison - Davis - Bishops' No. 4 Guerra and Harrison, D.D.'s No. 4 Lula George are drilling below the surface casing, and Cortez Oil Co.'s No. 1 Guerra is spudding in.



Mills Bennett's No. 1 Watson & Shipp, discovery well of the new Fort Merrill Pool in Live Oak County, Southwest Texas

Cameron-Willacy

Four wildcats are under way in Cameron and Willacy Counties, bringing drilling activity to all four of the Rio Grande Valley counties. Kingwood Oil Co.'s No. 1 Port Isabel is staked 6 miles north of Bayview. Joseph F. Anderson, of Salt Lake City, Utah, is spudding in No. 1 Anderson, in Block 397, 3 miles northeast of Rio Hondo in Cameron County. Drilling has been resumed in two Willacy County wildcats, Kingwood Oil Co.'s No. 1 Santa Rosa, south of San Sebastian, and L. & S. Drilling Co.'s No. 2 Armendiaz. This well was formerly under the operation of W. T. Daniel.

Duval County

In northern Duval County, the Seven Sisters Field added a producer and appeared due for two more early next week. Atlantic Oil Producing Co.'s No. 1 J. F. Welder came in flowing 27 bbls. per hour through a quarter-inch choke from sand at 2,518 feet. Drill stem tests on Humble Oil & Refining Co.'s No. 1-B Sevier and Santa Clara Oil Co.'s No. 13 Wood-Welder showed indications of equally good producers. The former tested 1,650 feet of oil in 15 minutes with sand at 2,474-82 feet. The Santa Clara well tested 1,150 feet of oil in 10 minutes.

Loma Novia

Six average wells were completed in Loma Novia Field of Duval County. They are: Hammil, Smith and Ogden's No. 2 Hubbard, in Survey 77, the same company's No. 1 C. W. Hahl, in Survey 8, Frank Gravis' No. 1 Flodin, in Survey 78, Bridwell Oil Co.'s No. 2 Hubbard, in Survey 77, Stieren Oil Co.'s No. 5 Trevino, in Survey 72, and Shell Petroleum Corp.'s No. 4 Hubbard, in Survey 77. One well, East Texas Petroleum Co.'s No. 1 Hubbard, in Survey 71, was temporarily abandoned. Russ Petroleum Co. completed No. 3-D Hahl for a gasser making 20,000,000 feet per day. To the north of Loma Novia, in the Loma Alta Field, McMullen County, Illinois Petroleum Co. abandoned No. 1 Atkinson at 2,501 feet. This makes the third dry hole in the field, composed of two producers.

Live Oak County

J. O. Whittington last week announced location of his No. 3 Little, 660 feet southwest of No. 2 Little, discovery well of the new Live Oak County Field, brought in two weeks ago. No locations have been reported in the Fort Merrill Field, brought in two weeks ago by the completion of Mills Bennett's No. 1 Watson and Shipp. One abandonment was reported for Live Oak County in the past week. It was Houston Oil Co.'s No. 1 Frederick which showed salt water at 5,223 feet in the Dinero Field.

San Patricio County

The Plymouth Field in San Patricio County was the scene of several completions in the past week, with Plymouth Oil Co. bringing in two wells and Heep Oil Corp. completing three. The new Heep producers are Nos. 7-E, 8-E and 1-F Welder with the sands occurring at 5,580 feet and 5,620 feet. Flow on these three wells was gauged at 130, 260 and 200 bbls.,

respectively. Plymouth's No. 9-C Welder was completed but not yet gauged. Plymouth's No. 10-C came in as a gasser with a tubing pressure of 2,200 pounds, and may be deepened to make an oil producer of it.

Webb County

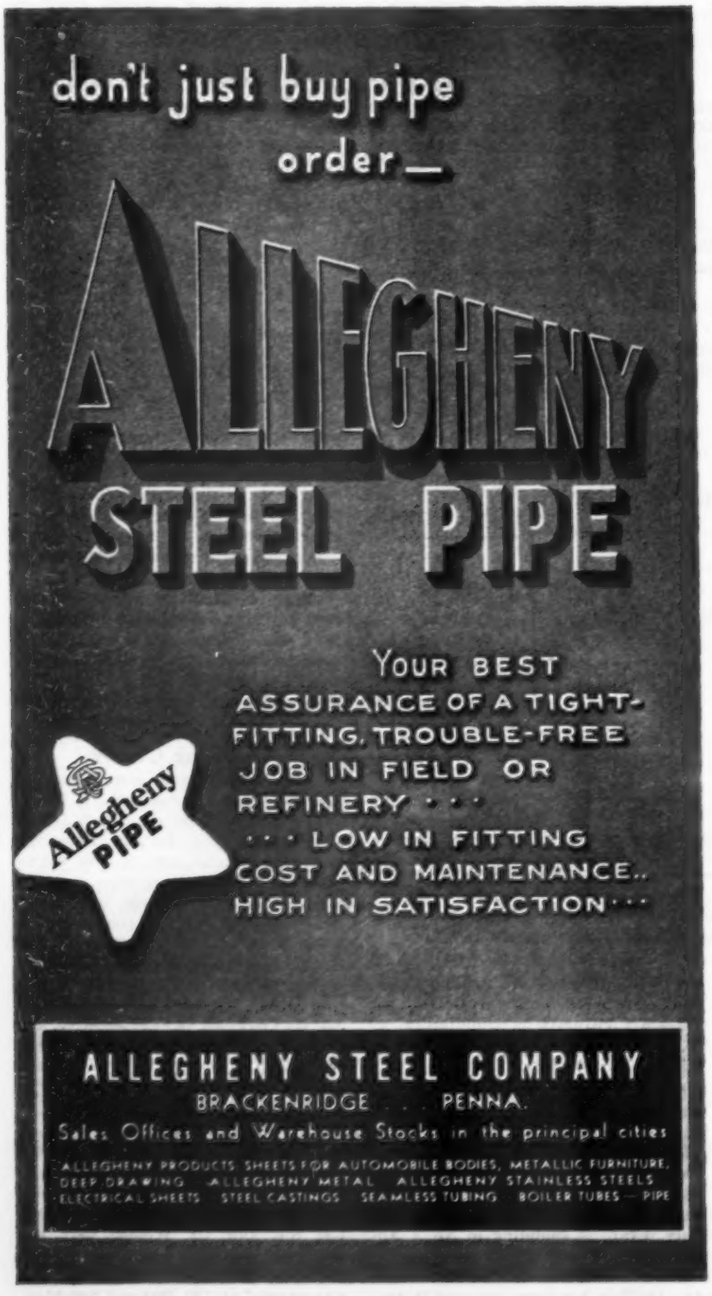
In Webb County three completions were made in the Cole area, and one producer and one dry hole reported for the Lopez Field. The interest in Webb County was centered on Carolina-Texas Oil & Gas Co.'s No. 11 S. Benavides, in the Carolina-Texas Field. This well was brought in last week as a prolific gasser making from 30,000,000 to 40,000,000 feet of gas per day together with a great volume of gasoline. A casing pressure of 1,800 pounds and a tubing pressure of 1,675 pounds are recorded while the well is flowing. It is expected oil will be produced in time from the well.

First spudded in in the latter part of October, 1933, the hole was carried to 3,334 feet and abandoned. Drilling was resumed in February of this year and at 4,995 feet it was completed as a gasser spraying some oil. In attempting to complete the well as an oil producer shortly after, the drill stem, 4,200 feet long, was lost in the bottom of the hole. Contract was then let to Trinity Drillers, Inc., of San Antonio to clean the hole and complete the well. After cleaning and placing screen at 5,056 feet the well was swabbed and brought in. Cores taken at this depth show alternate sand and shale. It is the only well in the area outside of Lopino producing from the Mount Selma.

Oil Exchange Contracts

NEW YORK, Sept. 2.—The Commodity Exchange, Inc., has adopted changes in future contracts for gasoline and crude oils which it is believed will stimulate trading. The new contract for gasoline is entitled "B Contract" in which trading commenced August 29. The present contract will be entitled "A Contract" and February, 1936, will be the last month for trading and delivery in this contract. The important changes in the new "B Contract" as against the present contract are as follows: The elimination of the port of New York as a delivery point. The adoption of additional specifications for color and gum tests. The federal tax not to be included in the bid and offered price, said tax to be added to the invoice.

The new contract for crude oil is entitled "No. 2 Contract," trading in which also commence August 29. The present contract will be known as "No. 1 Contract" and January, 1936, will be the last month for trading and delivery in this contract. The important changes in the new No. 2 crude oil contract, as against the present contract, are as follows: (1) The elimination of Cushing-Drumright area, Oklahoma, as a delivery point. (2) The elimination of crude oils from Gray, Carson, Hutchinson, Moore, Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties, Texas, as deliverable grades. (3) An increase in the A.P.I. gravity of deliverable East Texas oils.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A.I.M.E. Transactions

The annual edition of American Institute of Mining Engineering Transactions of the Petroleum Division, Vol. 114, "Petroleum Development and Technology—1935" is now available to members and others interested. The book contains at least one paper upon the most important technical developments covering each branch of the industry.

In addition statistical information covering the oil-producing states is included bringing more nearly up to date the work started in the 1934 edition. These data, while not complete in all details, have proved of great assistance to those seeking quick reference to conditions governing production in this country. Some foreign fields are covered in the same manner in this new edition.

The book contains 550 pages, cloth bound, and the price to non-members of the Institute is $5 per volume. Copies may be secured by writing the American Institute of Mining Engineers, No. 29 West Thirty-ninth Street, New York City.

Seismographic Contract

To facilitate the closing of a contract to send a seismograph party from Rumania to Austria, G. H. Westby, president, Seismograph Service Corp. of Tulsa, had a two-way telephone talk with his representative in Ploesti, Rumania, one day last week. Representatives for the Austrians desiring the service were in the Ploesti office of the Seismograph Service Corp. at the time of the conversation and the party is to start for Austria at once. This party has been engaged in geophysical work in Rumania for over a year. They have also worked in Germany and instruments made by the Tulsa company are in use by the Soviet government in U.S.S.R. This company has 14 parties now in the field in various parts of this country, several of them being recently moved to the vicinity of the Rodessa, Louisiana, activity. Four other parties are doing field work in eastern Colorado and four in Oklahoma with one party in western Kansas. Other parties are on the Gulf Coast of Texas.

Rocky Mountain Runs

Estimated daily average production for the week ending August 31 follows:

WYOMING

	Bbls.
Salt Creek	16,760
Big Muddy	1,540
Badger Basin	40
Black Mountain	300
Byron	1,400
Dallas Derby	570
Dutton Creek	80
Elk Basin	600
Ferris	20
Frannie	550
Garland	1,030
Grass Creek	2,570
Greybull	10
Hamilton Dome	1,760
Hudson	300
LaBarge	1,220
Lance Creek	1,780
Lost Soldier	1,310
Mule Creek	shut in
Midway	50
Notches	shut in
Oregon Basin	3,100
Osage	600
Pilot Butte	20
Rex Lake	shut in
Rock River	1,490
South Casper	520
Poison Spider	210
Teapot	30
Waugh Dome	200
Total Wyoming	38,050

MONTANA

Buckley-Border	260
Cat Creek	870
Cut Bank	6,590
Dry Creek	50
Kevin-Sunburst	3,950
Lake Basin	50
Pondera	1,430
Total Montana	13,200

COLORADO

Florence	160
Fort Collins and Wellington	370
Iles Dome	3,020
Moffat	500
Orchard	80
Rangely	80
Tow Creek	180
Total Colorado	4,390

NEW MEXICO

Artesia	640
Cooper area	7,900
Eunice	9,570
Hobbs	30,280
Hogback	250
Hospah	shut in
Jal	4,180
Lea area	1,250
Maljamar	1,920
Monument	410
Rattlesnake	710
Table Mesa	90
Total New Mexico	57,200
Total Rocky Mountain region	112,840

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA COMPANIES

	July 31, 1935	June 30, 1935	July changes	July 31, 1934
1. Non-gasoline-bearing crude, residuum, gas and Diesel oils	65,011,287	63,566,559	+1,444,728	78,448,445
2. Gasoline-bearing crude	32,499,639	33,284,045	— 784,406	35,851,686
3. Unblended natural gasoline	2,258,332	2,522,508	— 264,176	2,512,023
4. Gasoline (not including distributing and service stations)	8,787,430	9,429,248	— 641,818	13,068,436
5. Naphtha distillates	*1,261,486	*1,290,566	— 29,080	*1,315,191
6. All other stocks	†8,642,723	†8,448,953	+ 193,770	†7,218,639
Total	118,460,997	118,541,979	— 80,982	138,414,420
* Estimated amount of unfinished gasoline contained in item No. 5	954,664	1,048,129	.....	1,027,330
† Coke included in item No. 6	521,207	527,537	.....	607,124

West and North Texas

TEST IN COWDEN EXTENSION IS SHOWING INCREASE IN OIL

By L. E. BREDBERG

FORT WORTH, Tex., Sept. 2.—Sun and Atlantic's 2½-mile northwest extension to the Cowden Field in northern Ector County, which started deepening late last week from 4,300 feet, shows some signs of making a better producer than was indicated after acid treatment at former total depth. It is drilling around 4,320 feet and apparently picked up an increase in oil at 4,312 feet where it made a head and this may be top of another pay. Prior to deepening from 4,300 feet it had been treated with 2,000 gallons of acid after which it flowed 36 bbls. per day, 45 per cent water and 55 per cent oil for a couple of days through tubing. It fell off, however, and the day before deepening was started bailed only 20 bbls. oil and 10 bbls. water after tubing was pulled. The hole is reported to be in rather bad shape and operators are of the opinion the casing seat was damaged when packer was pulled.

Eppenauer Drilling Co.'s No. 1 Wight-Continental, in Section 22, Block 43, Township 1s, T.&P. Survey, 2-mile south extension to the Cowden Field, is preparing to plug back from 4,260 feet and shoot in the pays at 4,114-64 feet and at 4,165-74 feet. It had more than 3,000 feet oil in the hole when swabbed at 4,255 feet but drilled into water between 4,255 feet and total depth. It is lower than producers at the south end of the field but will probably make a small producer from the upper pays.

Down in extreme southwest corner of the county, Westbrook and others' No. 1 Yarborough and Allen is drilling around 400 feet in surface formations. This well is on a block originally held by Gulf in which Westbrook was given half interest to drill a test. Gulf also gave Westbrook two quarter sections east of the Hendricks Field for the same test.

Penn Pool Area

An interesting development in the Penn Pool area is the showing of C. L. Peter's No. 1 Connell about half a mile west of the Penn Pool proper and a mile south of Black's west extension producer. The Peters well topped first saturated lime at 3,425 feet and had first show of live oil at 3,430 feet and is drilling below 3,450 feet with the hole slowly filling with oil. This would make it about 15 feet higher than the north producers of Black and about 25 feet higher than George Farley's well on the west. Development has increased gradually around the Penn Pool during the past year and several good extensions have been brought in adding considerable new production to the pool's potential.

Crane County

In Crane County, the most important development last week is the showing of American Liberty Oil Co.'s (Cranfill Brothers) No. 1 Tubbs which will open some kind of a field about 2½ miles southeast of old Tubbs production discovered several years ago by Cranfill. The American Liberty test encountered top of pay at 4,298 feet and drilled to 4,301 feet where it was shut down to build storage. Oil rose 700 feet in the hole first 14 hours and while storage was under construction rose to 3,200 feet. Storage has been completed and the well will be deepened before a test is made. The 7-inch casing had previously been cemented at 4,050 feet.

Dobbs and others' No. 1 Jax Cowden, another Crane County wildcat, and located in Section 38, Block 1, H.&T.C. Survey, in southern part of the county, struck water at 2,324-30 feet and will probably be abandoned at this depth, although this has not been definitely announced. It had a small showing of oil at 2,305 feet, but not enough to warrant a test.

Gulf Production Co.'s No. 1 Waddell and others, in Section 4, Block B-27, P.S.L. Survey, Ordovician test, is drilling ahead below 5,650 feet in dark gray lime.

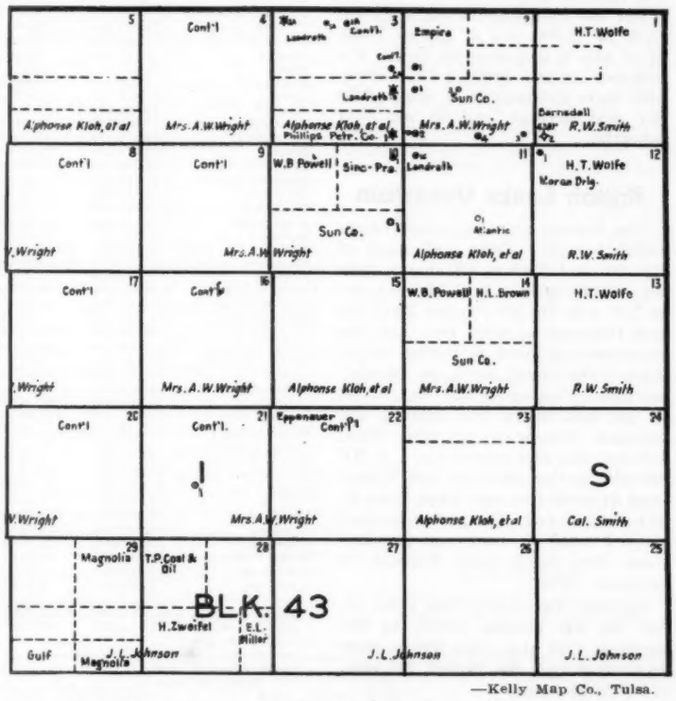
Gulf's No. 1 McKnight, wildcat in Section 9, Block B-21, P.S.L. Survey, which had been pumping some oil with considerable water at total depth of 3,713 feet, was plugged back and the hole cemented. After testing for water shut-off and testing dry, it started drilling cement and is drilling out below 2,600 feet.

Glasscock County

Moore Brothers' No. 1 Erie Miller, wildcat in Section 35, Block 34, Township 5s, T.&P. Survey, of Glasscock County, set the 8¼-inch casing at 747 feet and is drilling ahead at 1,150 feet in shale.

Andrews County

Andrews County gained one new wildcat test and another was abandoned after getting sulphur water.



—Kelly Map Co., Tulsa.

Operations in Cowden area, Ector County, West Texas

Gulf Production Co. made location for No. 1 J. S. Kelly in northwestern part of the county and is moving in rig. It is 330 feet from south and west line of Section 10, Block A-38, P.S.L. Survey, and may only be drilled to the anhydrite if it runs low structurally. This was the procedure with its No. 1-A Kelly, in Section 2, Block A-38, P.S.L. Survey, which was abandoned at 1,770 feet in anhydrite topped at 1,707 feet.

Crafton Oil Co.'s No. 1 Richards & McWhorter, wildcat in Section 13, Block A-30, P.S.L. Survey, also in northwest part of the county, was abandoned at 4,775 feet, where it encountered water.

Location for No. 1 Gowen was announced by Sun Oil Co. in NE cor. of Section 15, Block A-43, P.S.L. Survey, as a south offset to Humble's No. 1 Walker, which extended the Fuhrman Pool about 2 miles to the north several months ago. The Sun location, however, may not be drilled at present.

Sun Oil Co.'s No. 1 J. S. Means, in Section 8, Block A-35, is drilling ahead at 1,500 feet. This well is southwest of Means production and is expected to throw considerable light on possibilities of that field.

Upton County

Humble Oil & Refining Co. has started drilling cement in its No. 1 Pollock, Ordovician test in Section 4, Block M, Upton County. The 8⅝-inch casing was cemented at 8,274 feet with total depth of 8,868 feet, and is drilling cement around 8,400 feet. The hole had been caving some before pipe was set.

Gulf is still trying to complete No. 103 McElroy in the regular McElroy pay. Present total depth is 3,384 feet, and it was acidized after perforation from 2,720-2,900 feet and showed enough oil to make a small pumper. Tubing has been pulled and will be re-run, after which it will be put on the pump.

Yoakum County

In Yoakum County, Davidson & Honolulu's No. 1 Bennett, Section 678, Block D, J. H. Gibson Survey, is drilling below 4,360 feet and is still in anhydrite.

Winkler County

The most southeasterly well in the Keystone area of Winkler, Gulf Production Co.'s No. 9 Keystone, is coring at 4,000 feet with no shows of oil or gas reported. This test is in Section 13, Block B-2, P.S.L. Survey, and is south of its No. 8 Keystone, which is washing out caving with total depth 3,894 feet. No. 8 has failed to get any more indications of oil in deepening from 3,887 feet, where it was shot with little results.

Gulf's No. 5 Keystone is drilling at 3,546 feet without increase in oil, but is flowing better than 250 bbls. per day while drilling. It is one of the highest wells in the area. No. 3 Keystone is drilling at 3,558 feet and flowing 30 bbls. oil and 20 bbls. water daily, and No. 2 is cleaning out at 3,435 feet, flowing around 30 bbls. daily.

Siosi Oil Co.'s No. 1 Lovett, wildcat in the Kermit townsite and in Section 36, Block 26, P.S.L. Survey, has drilled to 3,024 feet and will probably be deepened another 20 feet or so before shooting and testing. It is still spraying around 50 bbls. oil per day with 8,000,000 feet of gas.

One good producer was added in the Brown-Altman area by Fox & Butler. Its No. 2 Brown-Altman was completed with a potential flow of 365 bbls. daily and given an allowable of 150 bbls. daily. Total depth is 3,200 feet, where it had one-half

bailer of water an hour, plugged back to 3,192 feet. Pay was topped at 3,098 feet.

Texas Pacific completed its No. 4 Daugherty in the Sayre Pool, northeast of the Hendricks Field, for 990 bbls. daily at total depth 2,938 feet, following a shot with 500 quarts.

New Texas Allowable Rejects Acreage

AUSTIN, Tex., Sept. 2.—Orders were issued Wednesday by the Texas Railroad Commission fixing a daily allowable of 1,027,363 bbls. for Texas oil fields, effective at 7 a.m. September 1.

The August allowable was 1,001,427 bbls., which was 25,936 bbls. less than the September allowable. The September allowable was 32,537 bbls. less than the Bureau of Mines estimate of a daily market demand for Texas crude of 1,059,900 bbls. The margin was retained to provide for new pools, Chairman Ernest O. Thompson said.

The commission rejected the proposal by major companies that acreage proration be made in East Texas, that it was necessary to conform with a decision of the Supreme Court in the case of Brown vs. Humble company. The commission, while reiterating its intention to abide by the court's opinion at all times, ruled that the present method of proration in East Texas of allowing wells to produce 3 per cent of the average hourly potential producing capacity, "is the fairest method possible."

The hearing on the proposal just closed, the commission said, "raises grave doubts as to the wisdom or value of any Rule 37 in preventing waste or in aid of the recovery of oil, except in the instances of certain new fields and then only as a prevention of fire hazards and blowout dangers."

The commission asserted that the existing method of proration prevents waste, conserves the oil and gas within the East Texas Field and does not result in injury to any lease operator or owner in that field.

The order quoted a part of the court's opinion defining the duties of the commission.

"Our uncertainty arises out of the fact that, in the exercise of our duties at hearings held over a number of years, a substantially preponderant majority of the expert witnesses have testified under oath to facts which do not harmonize with, but contradict the statement that when an oil field has been fairly tested and developed, experts can determine approximately the amount of oil and gas in place in a common pool and can, also, equitably determine the amount of oil and gas recoverable by the owner of each tract of land under certain operating conditions," the commission said.

"In fact, the testimony we have heard at this and other hearings held in the past is to the effect that surface ownership has no true relation to the oil and gas reserves which may underlie the particular surface, and that sufficient information is not available in the state of engineering science today to determine with that degree of exactitude indicated by the quotation from the opinion the amount of oil and gas in place in a common pool and equitably to determine the amount of oil and gas recoverable by the owner of each tract under certain operating conditions.

"We further find from the evidence the more wells that are drilled, the greater will be the ultimate recovery of oil and gas from any given pool."

The East Texas allowable, based on the present method of proration, was set at 443,432 bbls., compared to 433,000 bbls. July 22. The Panhandle allowable of 52,800 bbls. was unchanged, as were allowables of 1,500 bbls. for Moore County and 837 bbls. for Foard County.

September 1 and July 22 allowables, respectively, for other fields were:

North Texas, 58,500 and 56,000 bbls.; West Central Texas, 49,195 and 49,991 bbls.; West Texas, 130,120 and 126,164 bbls.; East Central Texas, 47,836 and 47,378 bbls.; Southwest Texas, 95,759 and 90,847 bbls.; and Gulf Coast, 147,384 and 143,270 bbls.

The allowable for sweet gas in the East Panhandle Field was set at 94,000,000 feet daily and in the West Panhandle at 360,000 feet, lower than the previous month. Total market demand for sweet gas outside the Panhandle was estimated to be 223,638,000 feet daily, or 20,000,000 feet less than in August.

For the Panhandle Field a gas-oil ratio of 12,000 feet of gas to 1 bbl. of oil plus a displacement factor was ordered. It was ordered that allowable there continue on a basis of 50 per cent acreage and 50 per cent potential.

Britton Looks Uncertain

The Britton area just north of the Oklahoma City Field and south of the Edmond Pool in Oklahoma, does not look promising. J. E. Mabee's test in NW SW SE NE Section 20-13-3w, had Dolomite at 6,582 feet, and has taken several cores including one at 6,764-69 feet, total depth, on Tuesday morning. Nothing in the way of oil or gas has shown, but drilling will continue. Southeast of this, Slick-Urschel, Inc. and others' No. 1, C NE NE SW Section 29-13-3w, had Wilcox sand at 6,885 feet and cored from 6,910 to 6,917 feet. The part recovered showed some oil stain and preparations were being made Tuesday to continue coring.

Amerada Petroleum Corp.'s No. 11, NE SE SE Section 29-9-6, in the Seminole City area, had Wilcox sand at 4,105-28 feet and flowed 257 bbls. of oil in 11 hours.

Arab Petroleum Co.'s important test in Cleveland County, Oklahoma, SE SE NW Section 16-7-1e, was drilling at 6,048 feet.

Pure Oil Co.'s No. 1, SW SW SE Section 3-14-3w, in the northern part of the Edmond Pool in Oklahoma County, had Wilcox sand at 6,706 feet and cored at 6,723-25½ feet. Detailed information is being withheld at the well.

Bell Refinery Sold

CALGARY, Alberta, Aug. 31.—A. G. Spooner, president of the Bell Refining Co., has announced the sale of the Bell refinery at Calgary to unnamed interests. The sum involved has not been disclosed. Calgary representatives of the British-American Oil Co., Imperial Oil, Ltd. and the Texas Oil Co. of Canada, Ltd., all deny that the sale is to any of their respective companies.

Big Gasoline Demand Indicated by Rise

The total consumption of gasoline in the United States during June was 1,572,525,000 gallons, according to figures taken from the monthly statistics of the Bureau of Mines. June consumption represents an increase of 5.39 per cent over the total for June, 1934, and the daily average an increase of about 10 per cent over that of the month preceding, pointing to the probability of a record season in 1935. The six months ending with June show an increase in the daily average consumption of 3.95 per cent over that of the first six months of 1934.

The figures below are based upon the quantity of gasoline sold or offered for sale, as reported by wholesalers and dealers in the states listed, under provisions of the gasoline tax or inspection laws.

GASOLINE CONSUMPTION BY STATES

	June, 1935 (gallons)	June, 1934 (gallons)
Alabama	14,109,000	12,908,000
Arizona	6,977,000	6,401,000
Arkansas	11,578,000	11,640,000
California	128,732,000	116,126,000
Colorado	17,481,000	14,042,000
Connecticut	25,040,000	25,056,000
Delaware	4,466,000	3,966,000
Dist. of Columbia	10,074,000	8,931,000
Florida	19,095,000	17,145,000
Georgia	21,666,000	19,837,000
Idaho	6,887,000	6,176,000
Illinois	95,412,000	92,517,000
Indiana	44,620,000	40,031,000
Iowa	36,405,000	35,677,000
Kansas	40,317,000	41,346,000
Kentucky	16,869,000	16,286,000
Louisiana	15,119,000	14,686,000
Maine	11,500,000	12,416,000
Maryland	19,300,000	19,208,000
Massachusetts	57,511,000	56,682,000
Michigan	79,014,000	69,787,000
Minnesota	40,999,000	38,242,000
Mississippi	12,131,000	10,975,000
Missouri	43,072,000	42,890,000
Montana	9,199,000	8,393,000
Nebraska	19,037,000	18,320,000
Nevada	2,600,000	2,355,000
New Hampshire	6,850,000	7,317,000
New Jersey	67,397,000	63,569,000
New Mexico	5,461,000	5,024,000
New York	142,399,000	149,082,000
North Carolina	25,324,000	21,673,000
North Dakota	10,520,000	8,875,000
Ohio	88,255,000	83,836,000
Oklahoma	30,420,000	29,566,000
Oregon	16,213,000	16,567,000
Pennsylvania	118,252,000	103,936,000
Rhode Island	10,430,000	10,489,000
South Carolina	11,922,000	10,652,000
South Dakota	10,777,000	8,640,000
Tennessee	18,395,000	18,109,000
Texas	80,561,000	79,098,000
Utah	6,478,000	5,818,000
Vermont	4,965,000	5,060,000
Virginia	24,678,000	23,784,000
Washington	23,807,000	22,505,000
West Virginia	14,258,000	13,741,000
Wisconsin	39,984,000	38,612,000
Wyoming	4,969,000	4,996,000
Total	1,572,525,000	1,492,088,000
Daily average	52,418,000	49,736,000
Change from previous year:		
Total change	+80,437,000	
Pct. change in dly. av.	+5.39%	

Magnetic Storm

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey reports a moderate magnetic storm began at 11 a.m. (C.S.T.) on August 27 and ended at 11 p.m. (C.S.T.) August 27. Telegram follows:

"Storm began twenty-seventh. Seventeen. Moderate. Ended twenty-eighth, five."

Average Retail Price

The average service station price of regular grade or "middle octane" gasoline was 13.78 cents a gallon, exclusive of all taxes on September 1, 1935, according to calculations based on pump prices in 50 representative cities throughout the United States. This is the first month of the current year to show a decline in the average price of station gasoline. The average price of gasoline on August 1 was 14.1 cents or .32 cent higher than the opening price of September.

The average price September 1, 1934, was 13.89 cents thus the 1935 price represents a loss of .11 cent a gallon as compared to that of a year ago, and gain of .88 cent since January 1, 1935, when the average composite price was 12.90 cents a gallon.

Engineers of Bureau Sent to Rodessa

Arrangements have been made with the U. S. Bureau of Mines, Experimental Station, Bartlesville, Okla., to secure pertinent data on United Gas Public Service Corp.'s No. 1 Young well in the new Rodessa Field, Louisiana. Seven men, each a specialist in his particular department, were dispatched to the well to take bottom samples of oil and gas, bottom hole pressures, and secure samples of oil and gas from both high and low pressure oil and gas separators. Hole temperatures were also to be secured with a new type of recording thermometer recently developed by the Bureau of Mines.

This new thermometer is lowered into the hole on a measuring line and is equipped with two time charts. If it is desired to secure a reading the instrument is stopped at any depth and the position recorded. After being left in this position for any length of time the record will be traced upon the chart and knowing the time interval it is possible to later plot temperature gradients from this record.

The purpose of these tests will be to determine during the early life of the well the gas-oil ratio of the Glen Rose formation, from which the well produces, to estimate the space occupied by this oil and gas and estimate critical pressures below which gas will come out of solution in the oil. This work will be repeated upon other wells in the field as completed and from these data it will be possible to predict and regulate best production practice for the field.

The Glen Rose formation has been cored below the casing about 400 feet and much of this core will be made available to the Bureau of Mines engineers for study of its characteristics. The casing is set in anhydrite at about 5,620 feet and the bottom of the hole is 6,048 feet.

The party from the Bureau of Mines was composed of W. B. Berwald, E. J. Dewese, D. W. Taliaferro, Kenneth Eilerta, Peter Grandome, H. A. Buss and M. A. Schellhadt.

Michael O'Loughlin, of Fredonia, N. Y., is visiting his brother, J. J. O'Loughlin, deputy oil umpire in the Seminole, Okla., district. Together they visited M. F. Moroney and J. J. Moroney, of Okmulgee, and Hal Gruber of Tulsa, who attended the reunion of the five, who had been boyhood friends in Ohio. Mr. O'Loughlin will return to Fredonia in a few days.

W. H. Lamprecht, II, of Cleveland, Ohio, has become president of the National Refining Co., which his father, the late J. I. Lamprecht, founded 53 years ago. Mr. Lamprecht has been active in the affairs of the company for 33 years. He was elected to fill the vacancy caused by the death last April of Frank B. Fretter.

North Louisiana, Arkansas

WELL TO EAST OF RODESSA DISCOVERY PROVES GASSER

By J. R. CRUMPTON

SHREVEPORT, La., Sept. 2.—Haynes Production Co.'s No. 1 Tyson, Section 24-23-16, 2¾ miles east of the United Gas Public Service Co.'s No. 1 Young, in Section 21-23-16, the discovery oil well of the Rodessa Field, came true to predictions and was a huge gasser. The well gauged 70,907,880 feet of highly saturated gas from Oolitic lime at a total depth of 5,885 feet. The only two completions since first oil well was brought in in that area were started before the discovery completion and happened to be upon the gas structure which has produced a highly saturated gas carrying from 1,000 to 1,500 gallons of gasoline per million feet since the field was uncovered about six years ago.

As is well known in oil circles in this district, the Rodessa trend runs northeast and southwest with a known fault line south of production, both oil and gas. The whole story of the productive area so far as oil is concerned depends upon the outcome of five or six wells drilling from three-quarters to 1½ miles north and east of the oil well and away from the gas district. These wells are pretty closely grouped in Sections 13, 14 and 15, with one drilling just outside the townsite limits of the town of Rodessa. Two offsets to the discovery well, one to the north and the other east, are making good progress.

Oil Well Expected

The well that is being watched as the second producer is Haynes Production Co.'s No. 1 W. B. Lawton, 1,980 feet north and east of SW cor. of Section 14-23-16. The log gave top of anhydrites at 5,087 feet and 7-inch casing has been set at 5,811 feet. The test is checking about 35 feet lower than the discovery well about 1¼ miles to the southwest, and all indications are that it will be another oil well. Other wells to the north of the gas area are rapidly approaching the pay horizon. Arkansas-Louisiana Gas Co.'s No. 1 J. S. Teamer, in the SE of SW of Section 13-23-16, topped the anhydrites at 5,043 feet and is drilling in anhydrites at 5,085 feet. The same company is rigging up on No. 3 Rodessa Oil & Land Co. in the NE cor. of Section 22-23-16. Haynes Production Co.'s No. 1 Harry Otwell, 660 feet north and 500 feet west of SE cor. of Section 15-23-16, topped anhydrites at 5,045 feet and is drilling in same formation at 5,363 feet. R. W. Norton's No. 1 Caddo Levee Board, Section 21-23-16, an offset to the north of United Gas Public Service Co.'s No. 1 Young, is drilling in lime and shale at 4,070 feet. O'Brien Brothers' No. 1 Rodessa Oil & Land Co., Section 14-23-16, one-half mile west of Haynes Production Co.'s No. 1 Lawton, drilling in shale and lime at 4,987 feet. Pelican Oil & Gasoline Co.'s No. 1 Sexton, one-half mile east of the Haynes' No. 1 Lawton, has set 9⅝-inch casing at 5,205 feet and drilling in anhydrites at 5,235 feet. United Gas Public Service Co. is drilling four wells as follows: No. 1 William Bremer, Section 22-23-16, drilling in shale and lime at 4,803 feet; No. 1 Gibson estate, Section 15-23-16, logged base of chalk rock at 2,504 feet, top of red beds at 3,392 feet, and drilling in shale and lime at 3,961 feet; No. 1 Rodessa Oil & Land Co. topped red beds at 3,420 feet and drilling in lime at 4,392 feet; No. 1 Thomas unit, Section 23-23-16, topped anhydrites at 5,003 feet and drilling in that formation at 5,300 feet.

North Louisiana Wildcats

The few wildcats in the North Louisiana district developed nothing of interest during the week, but are being closely watched as they are nearing the testing stage. In the northwestern part of Bienville Parish, N. V. Duncan's No. 1 Joby Miller, Section 9-18-7, logged base of chalk rock at 2,320 feet and is coring at 2,559 feet. Plain Dealing Syndicate's No. 1 Dodson, Section 25-23-13, in the northwestern part of Bossier Parish, was dry on drill stem test at 3,557 feet, also tested dry at 3,340 feet and is coring at 3,562 feet. On the Gramling structure in Lincoln Parish, near the town of Simmsboro, Herman L. Brown's No. 1 Monstead, Section 10-17-4w, topped the chalk rock at 2,321 feet with the base at 2,663 feet and is drilling in shale and lime at 3,657 feet. This test is due to drill to 6,000 feet unless production is encountered in the Blossom or Woodbine sands.

The North Louisiana district reported seven completions with six dry holes and one small pumper in a proven district. This was in addition to the big gasser in the Rodessa Field. In the Bellevue shallow field of Bossier Parish, Premier Investment Co.'s No. 1 Weaver, Section 14-19-11, is pumping 8 bbls. of oil and 25 bbls. of salt water from a total depth of 482 feet. A wildcat in Avoyelles Parish, Southern Star Petroleum Co.'s No. 1 O. G. Boyette, Section 28-3-5e, topped the Vicksburg at 2,980 feet, top of Cockfield at 3,508 feet and was abandoned in salt water sand at 4,502 feet. The other five dry holes follow: Bossier Parish, W. A. Kirkland, trustee's No. 1 Jarrett and McKeller, Section 3-21-13, dry and abandoned at 2,650 feet; Caddo Parish, Leonard Co.'s No. 1 Julian Gamm, Section 35-21-15, salt water and abandoned at 2,265 feet; the same company's No. 1 Muslow, Section 9-20-15, salt water and abandoned at 2,231 feet. In the northwestern part of Jackson Parish near the town of Eros, American Liberty Oil Co.'s No. 1 Lusk, Section 1-16-1w, was abandoned as dry at 3,827 feet. The test logged the top of Ozans or Blossom horizon at 2,986 feet but developed salt water in the Blossom which was topped at 3,253 feet. Another test a few miles to the northeast in Ouachita Parish and on the same block of some 25,000 acres, No. 1 Golson, Section 25-17-1e, topped red beds at 3,515 feet and drilling in anhydrites at 4,565 feet. This test will be a Trinity well to 6,000 feet unless pay is contacted before that depth. In the eastern part of the Zwolle Field, Texas Co.'s No. 8 Stille, Section 3-7-11, was abandoned as dry at 2,740 feet.

ARKANSAS

No completions were reported from the Arkansas district and none of the drilling wells developed anything of interest. Two new locations were staked in widely separated areas. Benedum & Trees' No. 1 Holmes, in Section 4-17-4, Ashley County, is a derrick on a large block with a deep drilling contract. In Sevier County, Pendleton & Vaughn are rigging up on No. 1 State Life Insurance Co. of Indiana in Section 27-9-30. One new test was reported from Union County, Lion Oil & Refining Co.'s No. 7 Hary-Murphy in Section 9-16-15.

Crude Production

Estimated daily average production for the week ending August 31, follows:

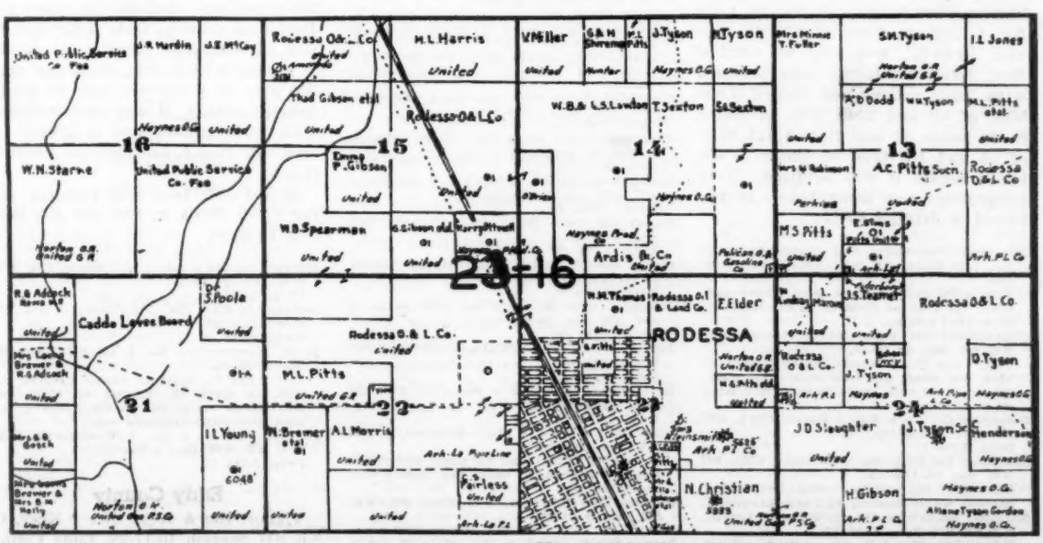
NORTH LOUISIANA

	Bbls.
Bellevue	600
Caddo light	5,850
Caddo heavy	2,160
Converse	1,125
Cotton Valley	425
DeSoto and Red River	1,410
Elm Grove	455
Haynesville	3,390
Holly	150
Homer	2,675
Pleasant Hill	160
Rodessa*	1,240
Sarepta-Carterville	540
Urania	2,910
Zwolle	1,465
Total	24,555

SOUTH ARKANSAS

Champagnolle	2,165
El Dorado	2,240
Lisbon	320
Miller County	1,605
Nevada	900
Smackover light	2,340
Smackover heavy	18,110
Stephens	620
Urbana	2,080
Total	30,290

*The cause of the decrease in the Rodessa production is that the Bureau of Mines has been making some tests. The well has either been closed in or open only on a small choke for the major part of the week.



—Map furnished by courtesy of Globe Map Co., Shreveport, La.

All active operations in the Rodessa Field are within the indicated marks in Township 23-16

Rocky Mountain Area

By
T. R. INGRAM

HOBBS POOL IN LEA COUNTY HAS A NEW WELL, 7,896 BBLS.

DENVER, Colo., Sept. 2.—The Union Oil Co. of California, which retired from the Rocky Mountain area in 1929, is reported closing a deal to re-enter this territory through the purchase of interests in the Dutton Creek Field in Wyoming. Towns adjacent to the Lance Creek Field are having a boom as a result of the completion of several big Sundance wells in that pool in recent months. One small well and one dry hole were reported in the Osage Field.

There were no completions or new operations reported in Colorado.

Five wells were completed in the Cut Bank Field in Montana, the Santa Rita Oil & Gas Co.'s No. 1 Stahl, which swabbed 250 bbls. in 16 hours, being the best. Five new operations were getting under way. Two completions and four new operations were reported in the Kevin-Sunburst Field.

Utah had one new operation spudding.

Northwest New Mexico had one small completion and one new operation.

In Lea County, Southeast New Mexico, a number of large wells were completed. The Hobbs area had a 7,898-bbl. completion. The Eunice Pool supplied two new oil wells, one starting at 368 bbls. and the other at 144 bbls. An old well in the Jal Pool, deepened, produced 1,020 bbls. of oil. Eddy County reported a small completion. Several wells in the southeastern fields of the state had near completions of interest.

NEW MEXICO

Hobbs Area

One well was completed in the Hobbs area in Lea County, southeastern New Mexico. Gypsy Oil Co.'s No. 4 Graham State, C SE NE Section 24-18-37, had pay at 4,022-30 feet, total depth. It was acidized with 3,000 gallons and flowed 7,898 bbls. of oil and 2,804 bbls. of water in 24 hours. It had flowed 121 bbls. of oil and 132 bbls. of water in six hours before it was acidized. Near completions are listed below in the record of drilling wells:

Amerada Pet. Corp. and Skelly Oil Co.'s No. 2-E State, NE NW NW Sec. 24-18s-37e.
T.D. 4,105 ft.; acidized with 12,000 gallons; 192 bbls. of fluid in 12 hours, mostly water; testing.
Continental Oil Co.'s No. 4 Grimes, SW NE SE Sec. 23-18-38.
T.D. 4,225 ft. in sandy lime; flowed 51 bbls. per hour; acidized with 3,000 gals., flowed 3,884 bbls. in 24 hours; reacidized with 4,000 gals.
Samedan Oil Co.'s No. 2 Byers, CWL SW NW Sec. 3-19s-38e.
Drlg. 3,460 ft.
Samedan Oil Co.'s No. 1-B State, CEL SE NW Sec. 25-18s-37e.
T.D. 4,244 ft., acidized with 1,000 gals.; showed water; testing and standardizing.
National Securities Oil Co.'s No. 1 Linam, NE SE SW Sec. 33-18-37.
T.D. 4,566 ft.; P.B. to 4,238 ft.; 1,000 ft. oil, 200 ft. water in hole, shut down for orders.
Shell Pet. Corp.'s No. 2 Turner, 1,020 ft. from N line and 2,316 ft. from E line, Sec. 34-18-38.
T.D. 4,226 ft., in lime; acidized with 3,000 gals.; swabbed 100 bbls. in nine hours; testing.
Shell Pet. Corp.'s No. 2 Rice, C SW SE Sec. 13-18s-37.
T.D. 4,168 ft.; acidized with 4,000 gals.; flowed 112 bbls. in three hours; 51 per cent b.s. and water.
Tide Water Oil Co.'s No. 1 State, 2,310 ft. from N, 330 ft. from E lines, Sec. 14-18-37.
Drlg. 1,450 ft.
Gypsy Oil Co.'s No. 1 Culp, 660 ft. from N, 1,980 ft. from W lines, Sec. 19-19-37.
Drlg. 2,358 ft.
Phillips Pet. Co.'s No. 1 Culp, C NW NW Sec. 19-19-37.
Drlg. 1,210 ft.

Monument Area

Jeffers Oil Co.'s No. 1 Britt, C SE NW Sec. 7-20s-37.
Drlg. 2,380 ft.

Lea Area

Culberson & Irwin's No. 1 Sue Richards, C SW SE Sec. 10-21s-32e.
Drlg. 2,300 ft.
Culberson & Irwin's No. 1 Eva Brown, C NE NE Sec. 23-21s-32e.
Drlg. 3,050 ft.

Eunice Area

Two completions was the record of the week in the Eunice Pool, Lea County.

Gypsy Oil Co.'s No. 2 Houston, C NE SE Section 7-21-36, had a showing of oil at 2,855-58 feet, but was completed in pay at 3,760-86 feet, starting at 368 bbls. of oil and 2,468,000 feet of gas, flowing naturally.

Continental Oil Co.'s No. 4-B-9 Meyer, C NE NW Section 9-21-36, flowed 144 bbls. of oil and 10,000,000 feet of gas in 23 hours from pay at 3,752-84 feet. It has shown gas production at various depths from 3,655 feet down to 3,747 feet, where the big gas was contacted. The well was drilled under pressure and will be reworked later.

Atlantic Oil Producing Co.'s No. 1-D State, C NW SE Sec. 20-21s-36e.
Drlg. 3,700 ft.
Atlantic Oil Prod. Co.'s No. 2-G State, C SW SW Sec. 5-21s-36e.
Drlg. 3,552 ft.
California Co.'s No. 2 Meredith, C SE SE Sec. 19-21s-36e.
T.D. 3,970 ft., 105 bbls. per hour, pay topped at 3,949 ft.; running 1¼-inch tubing.
Continental Oil Co.'s No. 8-A-4 Meyers, C NW SW Sec. 8-21s-36e.
Drlg. 3,420 ft.
Continental Oil Co.'s No. 17-B-1 Meyers, C NE SE Sec. 17-21s-36e.
Drlg. 2,032 ft.
Continental Oil Co.'s No. 8-B-3 Meyers, C SW NW Sec. 8-21s-36e.
Drlg. 3,700 ft.
Gypsy Oil Co.'s No. 1 Orcutt, C SE NW Sec. 5-21-36.
Drlg. 3,708 ft.
Gypsy Oil Co.'s No. 5 Ball-Ramsey-State, C SW SW Sec. 4-21-36.
Drlg. 1,150 ft.
Humble O. & R. Co.'s No. 5-B State, C SW NE Sec. 29-21s-36e.
Drlg. 3,300 ft.
Jim Murray's No. 1 Wallace, SW SW SW Sec. 3-21s-36e.
Drlg. 3,230 ft.
R. Olsen et al's No. 1 State, C NW SE Sec. 5-21s-36e.
Drlg. 3,870 ft.
Ohio Oil Co.'s No. 1 State-Maxwell, C NE NW Sec. 16-22-36.
T.D. 3,860 ft. in lime acidized with 2,000 gals.; swabbed 5 bbls. per hour; will reacidize.
Repollo Oil Co.'s No. 3 Adkins, SW SW SE Sec. 9-21-36.
Set 7-in. csg. 3,850 ft.
Texas Pacific Coal & Oil Co.'s No. 1-A State, Acct. 3, 1,974 ft. from W and 660 ft. from S line of SW¼ Sec. 9-22-36.
Drlg. 3,750 ft.
Twin State Oil Co.'s No. 1 Record, C NW NW Sec. 22-22s-36e.
T.D. 3,162 ft.
R. Olsen's No. 2 State, C NE SE Sec. 5-21-36.
Set 12½-in. pipe 83 ft.
Shell Pet. Corp.'s No. 2 Coleman, C NE SE Sec. 17-21-36.
Set 12½-in. pipe 364 ft.
Gypsy Oil Co.'s No. 1 Janda, C SE SE Sec. 20-21-36.
Drlg. 1,070 ft.
Empire Gas & Fuel Co.'s No. 1 State D, C NW NE Sec. 32-21-36.
Drlg. 1,168 ft.

Cooper Area

Continental Oil Co.'s No. 14-A-6 Vaughn, C NE SW Sec. 14-24s-36e.
Drlg. 2,357 ft.
Continental Oil Co.'s No. 14-A-3 Vaughn, C SW NW Sec. 14-24-36.
T.D. 3,537 ft.; tested 10 bbls. per hour with gas at 2,000,000 ft. daily rate; will acidize.
Gypsy Oil Co.'s No. 2 Cooper, C NW SE Sec. 23-24s-36e.
Set 7-in. csg. at 3,429 ft.
Humble O. & R. Co.'s No. 2 Moseley, C NW SE Sec. 10-24s-36e.
T.D. 3,631 ft.; drill stem test at 3,621-31 ft.; showed mud only; shut down for orders.
Humble O. & R. Co.'s No. 4 Coats, C NE NE Sec. 10-24-36.
Drlg. 2,550 ft.
Phillips Pet. Co.'s No. 16 Woolworth, C NE SE Sec. 27-24s-36e.
Drlg. 3,330 ft.
Tide Water Oil Co.'s No. 1 Coats, C SW NE Sec. 10-24s-36e.
Drlg. 3,525 ft.
Stanolind O. & G. Co.'s No. 1 Meyer B, C NW NE Sec. 26-24-36.
Drlg. 835 ft.
Skelly Oil Co.'s No. 2 Coates, C NE SW Sec. 3-24-36.
Drlg. 1,400 ft.

Between Eunice and Hobbs

Amerada Pet. Corp.'s No. 1 Andrews, NW NW NW Sec. 12-20-36.
Acidized with 2,000 gals. at T.D. 3,829 ft.; flowed 366 bbls. of oil in 4½ hours, with gas at rate of 7,500,000 ft.
Amerada Pet. Corp.'s No. 1 State B, C SW NW Sec. 36-19-36.
Drlg. 2,773 ft.
Shell Pet. Corp.'s No. 1 State B, C SW NW Sec. 36-19-36.
Drlg. 1,062 ft.
Twin State Oil Co.'s No. 2 Weir, C NE SE Sec. 36-19-36.
Drlg. 3,650 ft.

Jal Area

Continental Oil Co. deepened an old well, No. 1-A-12 Wells, SW NE NW Section 12-25-36, in the Jal Pool, Lea County, from 3,418 feet to pay at 3,395-3,447 feet, total depth. It produced 1,020 bbls. of oil and over 500 bbls. of water the first 24 hours through casing. It was then acidized with 2,000 gallons and a 22-bbl. oil load but it did not increase production.

Byrd-Frost, Inc., was building rig for No. 2 Wells A, SW SW NE Section 12-25-36.

Harry Leonard's No. 1-B Justice, SW NW NW Sec. 20-25-37.
Drlg. 3,078 ft.
Jeffers Oil Co.'s No. 1 Carlson, C NW SE Sec. 27-25-37.
Drlg. 3,230 ft.
R. H. Henderson's No. 1 Langley, SE SE Sec. 8-25-37.
T.D. 3,485 ft., sulphur water 3,482-85 ft., P.B. to 3,469 ft., flowed 60 bbls. per day; shot with 35 quarts; flowed 65 bbls. per day; cleaning out.
Phillips Pet. Co.'s No. 1 Woolworth, Blk. 2, C SW SW Sec. 6-25s-37e.
Drlg. 3,385 ft.

Eddy County

Tignor, Etz & Keys' No. 2 Keys, C NE SW Section 10-17-28, Eddy County, was a 3-bbl. completion at a total depth of 2,000 feet. It had showings of oil at 280-95 feet, 723-33 feet and 1,798-1,809 feet.

Fred Brainerd's No. 1 Brainerd, CEL NW NE Sec. 2-17s-28e.
S.D. in lime at 2,172 ft.
Fred Brainerd's No. 1 Featherstone, CEL SW SW Sec. 35-16s-28e.
Drlg. 125 ft.
R. D. Compson's No. 6 Mann, NW SW NE Sec. 4-18s-27e.
Drlg. 1,130 ft.
Coronado Exploration Co.'s No. 1 Anderson, C NE NW Sec. 13-20s-23e.
S.D. 1,462 ft.
Dooley & Shank's No. 1 McClay, C NE SE Sec. 32-18s-30e.
Drlg. in gray lime 3,159 ft.
Dooley et al's No. 1 Commerce Trust, NW NE SW Sec. 8-20s-27e.
T.D. 700 ft.; cemented hole to run pipe.
Etz Bros.' No. 1 State, C SE SW Sec. 16-17s-30e.
Moving in material. First report.
Flynn, Welch & Yates' No. 70 State, C NE NW Sec. 27-18-28.
Drlg. 2,144 ft.
Getty Oil Co.'s No. 7 Dooley, SW SW NW Sec. 24-20s-29e.
Drlg. 6,130 ft.
Rampo Oil Co.'s No. 1 State, CNL NE SE Sec. 32-18s-28e.
S.D. in lime at 2,361 ft.
Red Lake Oil Co.'s No. 5 State, NW NW NE Sec. 27-17s-28e.
S.D. in red beds at 165 ft.
Repollo Oil Co. and C. J. Dexter's No. 3-X Parke, SE SE SE Sec. 15-17s-30e.
Drlg. in lime at 2,925 ft.
Yates & Dooley's No. 1 Clark, C SW SE Sec. 35-18s-30e.
Location.
Van P. Welch's No. 1 State, NW NW NW Sec. 23-17s-28e.
Drlg. 1,535 ft.

Quay County

Quay County Development Co.'s No. 1, C SE SW Sec. 19-9n-33e.
Drlg. at 650 ft.; showing of gas.

Roosevelt County

R. M. Hancock's No. 1, SW NW NW Sec. 21-1n-37e.
Drlg. at 225 ft.

Sandoval County

Continental Oil Co.'s No. 1 L-Ranch, 2,010 ft. from N and 330 ft. from E lines, Sec. 2-13-14w.
T.D. 3,200 ft.; waiting for csg.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 1 Simon, C NE NE Sec. 29-17s-32e.
Location.

Chaves County

Comanche Drlg. Co.'s No. 2 Sloop-Purcell, C NE NE Sec. 15-11s-26.
Location.
John Tannehill's No. 1 Campbell, NE SE NE Sec. 1-11s-25.
Drlg. 550 ft.
Warman Oil Trust's No. 1 Weldon & Hoar, NW NW SE Sec. 9-14-25.
T.D. 1,683 ft. in sand; P.B. to 1,395 ft.; S.D.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc.'s No. 1, Gallegan Sur., C NW NW Sec. 19-11n-4e.
Drlg. 600 ft.

Sandoval County

Continental Oil Co.'s No. 1 L-Bar Cattle Co., CEL SE NE Sec. 2-13n-4w.
Drlg. 3,218 ft. in hard gray sandy lime.

San Juan County

Continental Oil Co.'s No. 46, NW SW SW Sec. 1-29n-19w.
Drlg. 787 ft. (first report).
Cross & Poole's No. 1 Aztec, Sec. 1-30-11w.
Making water shutoff at 740 ft.
A. E. Haney's No. 1 Hare, SE SE Sec. 14-20-11w.
Comp. 664-700 ft. for 3 bbls.
Jack Amenda's No. 2, NE SW Sec. 25-30n-12w.
Drlg. 400 ft.
Kutz Canon O. & G. Co.'s No. 1 Day, SW SW SW Sec. 20-28-10.
Drlg. 4,389 ft.; increase in gas.
Phillips & Spence's No. 2 Martin, NW NE SW Sec. 34-30n-11w.
Comp. for 238,000 ft. gas in sands at 937-49 ft. and 1,013-19 ft.

Nick Spatter's No. 1 fee, C NE SW Sec. 32-31-11w.
Drlg. at 1,560 ft.

W. R. Webb's No. 1 fee, CEL NE NW Sec. 6-30-11w.
P.B. from 1,500 ft. to 1,350 ft.; set pipe and preparing to test.

San Miguel County

Cabra Springs O. & G. Co.'s No. 1 Thompson. SW NE NE Sec. 22-12n-22e.
S.D. 4,030 ft.

Cabra Springs O. & G. Co.'s No. 2 West Pino Mesa. SW SW NW Sec. 31-12-22.
S.D. 726 ft.

Pioneer Oil Co.'s No. 2 Montezuma, CSL SE SW Sec. 14-15n-16.
Drlg. 300 ft.

Starr-Kennedy Oil Co.'s No. 3 Adams, NE NE SE Sec. 25-17-16.
Standing at 5,090 ft. after completing rig; to resume following fire.

Holmberg Interest's No. 1 Cantwell, NW NW NW Sec. 5-10n-9e.
S.D. 810 ft. (corrected).

Kelsey Clients Dev. Estate's No. 2 State, C NW Sec. 22-10n-10e.
S.D. 1,450 ft.

Torrance County

48 Pet. Co.'s No. 1 Greenfield, C NW SW Sec. 17-9n-8e.
Underreaming 8¼-in. to set at 700 ft.; T.D. 1,210 ft.

Bruce Frazier's No. 1 Frazier, SE Sec. 12-2n-31.
Drlg. 1,210 ft. in granite wash; water at 882-86 ft.

Union County

Sierra Grande Oil Corp.'s No. 1 Rogers, C NE SW Sec. 4-29-20.
T.D. 2,715 ft.; in granite.

Pres-Sel Dev. Co.'s No. 1 Morris, SE NE Sec. 30-12-10w.
Dry and abd. at 625 ft.

Ringle Dev. Co.'s No. 2 Tome grant, C NE SE Sec. 20-6n-3e.
Rigged and S.D.

Ringle Dev. Co.'s No. 1 Tome grant, C SE SE Sec. 36-6n-3e.
S.D. 400 ft.

Western Natural Resources Corp., Inc.'s No. 2 San Clemente, SE SE NW Sec. 5-6n-1e.
T.D. 6,001 ft.

COLORADO

Adams County

Riddle Pet. Co.'s No. 1 Baxter, C SW Sec. 2-3s-66w.
Standing partly rigged and drlg. wtr. well; T.D. 940 ft.; 6¼-in. lowered to 930 ft.

Archuleta County

Wm. E. Hughes Est.'s No. 1 fee, SW Sec. 24-33n-2e (unsurveyed).
Drlg. 1,320 ft.

Oil City Pet. Co.'s No. 1-A Garnett, NW NE NW Sec. 25-33n-2e.
S.D. 1,300 ft.; repairs.

Navajo Oil Co.'s No. 1 Crowley, SW SW NE Sec. 11-32n-1e.
S.D. at 830 ft. for 5 3/16-in. csg.

Baca County

J. H. Everett et al's No. 1, 320 ft. NW cor. Sec. 24-32-48.
Spudded wtr. well.

Boulder County

Leslie R. Steele et al's No. 1 Maxwell, SW NE NW Sec. 24-1n-71.
Fishing for tools at 1,665 ft.

Elbert County

Ramsey Pet. Corp. and C. E. Lambert's No. 1, near C Sec. 13-8s-57w.
Drlg. 1,005 ft. in hard rock with show of oil and gas.

Fremont County

Waterville Oil Co.'s No. 1 State, SE SE NW Sec. 16-18s-69w.
T.D. 2,780 ft.; 150 ft. of oil in hole; U.R. 6 3/16-in. at 2,750 ft.

Grand County

Colorado Oil Ref. Co.'s No. 1 Linke, NE SW SW Sec. 13-1n-77w.
Drlg. 2,360 ft.

Interstate O. & G. Co.'s No. 1 Hinman, NE NE NW Sec. 11-2n-81.
S.D. 2,997 ft.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Sec. 10-26-69.
S.D. 2,550 ft.

Collins & Quinn's No. 1, C W½ E½ Sec. 4-28s-68w.
T.D. 4,115 ft.; cmtd. whipstock at 3,750 ft. to drill by junk; (O.W.D.D. formerly Alamo Oil Co.'s No. 1 fee).

Jackson County

Colorado Oil Ref. Co.'s No. 1 North Park Coal, NW NW Sec. 18-9n-78.
T.D. 1,805 ft.; straight reaming for 12½-in. to set at 1,500 ft.

Continental Oil Co.'s No. 2 Hoye, NW NW NE Sec. 34-9n-78.
Drlg. 3,973 ft.; reamed 12½-in. hole from 3,786 to 3,941 ft.

Jefferson County

Ruby Hill O. & G. Co.'s No. 1 Braden, SE cor. Sec. 24-4s-69.
Drlg. below 4,230 ft. with small shows of oil and gas continuing.

Las Animas County

Mountain State Oil Corp.'s No. 1 Nickola, C NE NE SE Sec. 10-34-62.
S.D. 1,640 ft.

Lincoln County

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NE NE Sec. 7-17s-52.
Resuming at 2,200 ft.

Moffat County

The Mountain Fuel Supply Co. is going back into its No. 1 Kuykendall, and drill it deeper to sands in the lower Wasatch. This well was completed in the first sand at 1,992-2,025 feet early in 1928 for 37,000,000 feet of gas a day. This was one of the earlier wells completed in the gas field and subsequently additional gas sands were found below the horizon in which it was completed. It is located only 60 feet down from the crest of the dome.

Stanolind O. & G. Co.'s No. 5-S Parkinson, NW cor. SE Sec. 22-4n-92.
Drlg. 2,567 ft. in shale.

Montezuma County

McElmo Oil Co.'s No. 1 West, NE NW NE Sec. 21-36n-17w.
Drlg. 3,420 ft. in brown lime; shows of oil in streaks of gray lime.

Morgan County

Swisher et al's No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, Sec. 3-4n-60.
T.D. 5,275 ft.; top Tensleep sand 5,139 ft.; swbd. 350 bbls. oil; pumped 370 bbls.

Ohio Oil Co.'s No. 3 Byron Union, SE NW NE Sec. 22-56-97.
Drlg. 4,816 ft.

Ohio Oil Co.'s No. 4 Byron Union, SW NE Sec. 22-56-97.
Rig up.

Ohio Oil Co.'s No. 3 Sessions, NW SW NW Sec. 33-56n-97w.
Running 12½-in. to 591 ft.

Montana-Wyoming Oil Co.'s No. 1 Government, Lot 52, Sec. 18-56n-97w.
Location; first report.

Peay Oil Co.'s No. 2 Government, SE SE SE Sec. 10-55n-97w.
Bldg. derrick.

J. H. Shaffer's No. 1 Keachie, C SW SW Sec. 7-49-91.
Drlg. 1,351 ft.

Taylor Oil Co.'s No. 1 Hoskins, Lot 5 (SE SE), Sec. 25-56-97.
C.O. to bottom at 5,275 ft. and making new hole.

Wyoming O. & R. Co.'s No. 1 Evans, NE NE NW Sec. 12-49-91.
Set 1½-in. at 85 ft. (cor.) and S.D.

Yale Oil Corp.'s No. 1 Allen, Lot 52, Sec. 33-56n-97w.
Spudding with rotary; contract to Paul Stock; (first report).

Carbon County

Re-entrance of the Union Oil Co. of California into the Rocky Mountain area is foreshadowed in a deal reported being closed whereby that company proposes to purchase a half-interest in the holdings of Sidney H. Keoughan and associates on the Dutton Creek Dome in Carbon County in the Sundance and lower formations. The property was acquired by Keoughan from the Midwest Refining Co., predecessor to the Stanolind Oil & Gas Co., in 1932, that company retaining an interest. Keoughan drilled an oil well in the Muddy sand, in which horizon the Midwest completed two producers, and under a contract with the Ohio Oil Co., drilled several gas wells to the Shannon sand at 1,700 feet. The oil and gas are being marketed and Keoughan retains his interests in the horizons down to the Sundance. The Union company under the agreement will drill a test to the Sundance at around 6,200 feet. The Union company sold its holdings in this territory to the Continental Oil Co. in 1929 and retired from the field. Keoughan was president of the Continental at the time.

Left to right: N. M. Baird, scout for Republic Production Corp., New Mexico area; Dan Griffin, scout for Ohio Oil Co., and R. A. Konig, geologist for the Texas Co. in the New Mexico territory

Park County

South Park Oil Co.'s No. 1 State, SE SE SW Sec. 16-11s-75w.
Drlg. 2,945 ft.; carrying 8¼-in. at 2,930 ft. making enough gas to fire boiler.

Prowers County

Trojan O. & G. Co.'s No. 1 Lotus Oil, NW NE NE Sec. 15-23-46.
Drlg. below 5,359 ft.

Routt County

Mid-Colo. Pet. Co.'s No. 1 Omhalt, NE NE SE Sec. 29-4n-87w.
T.D. 2,750 ft.; preparing to run 8¼-in. to bottom wtr. in Dakota; show of gas at 2,750 ft. on top Lakota.

WYOMING

Albany County

California Co.'s No. 2 Holst, SW NE SE Sec. 13-17n-77.
S.D. 3,130 ft. for wtr.

California Co.'s No. 1 Wilson, NW SW SW Sec. 18-17n-76.
S.D. 1,010 ft. (cor.) for wtr.

Big Horn County

J. W. Bales' No. 1 Parker, C SW SW Sec. 23-49-89.
Drlg. 395 ft.

Peter Evanoff's No. 1 Griffin, Lot 60, Sec. 4-55-97.
Drlg. 1,750 ft. and carrying 15½-in.

Peter Evanoff et al's No. 1 McAllister, Lot 50, NW NE SE Sec. 3-55n-97w.
Drlg. 1,150 ft.

W. S. Gilbert's No. 1 Zaring, SE SE SE Sec. 35-52-93w.
Drlg. 860 ft.

Joan Oil Co.'s No. 1 Howell, Lot 63 (NE NW NE) Sec. 3-55n-97w.
Drlg. 720 ft.; (first report).

McAlpine O. & G. Co.'s No. 2, SE SE NW Sec. 3-55n-97w.
Moving in materials.

Ohio Oil Co.'s No. 2 Sidon Canal, C SW SW Sec. 24-56-97.
Ohio Oil Co.'s No. 4 Diamond Cattle Co., SE SW NW Sec. 35-20n-78w.
T.D. 3,537 ft.; P.B. to 3,325 ft. for test in upper Sundance at 3,212-35 ft.; acidized with 250 gals. and preparing to re-treat with 750 gals.

Ohio Oil Co. and California Co.'s No. 2 State, C NW NW Sec. 36-21n-79w.
Drlg. 3,000 ft.

Ohio Oil Co. and California Co.'s No. 1 Union Pacific, Acct. J, NE SW NW Sec. 25-21-79w.
Spudding.

General Pet. Corp.'s No. 1 Whitford, SW SE NE Sec. 24-20-84.
Coring 5,068 ft.; oil showing on sump.

General Pet. Corp.'s No. 1 Union Pacific, C SW SW Sec. 19-20-83.
S.D. 5,921 ft.; may be deepened.

Sinclair-Wyoming Oil Co.'s No. 9 Wertz, NE NW NW Sec. 7-26n-89w.
Digging cellar.

Converse County

Chadron-Osage Oil Co.'s No. 1 State, SW cor. Sec. 16-32-69.
Drlg. 1,500 ft.

Continental Oil Co.'s No. 60 State, NW SW NE Sec. 9-33-76.
T.D. 2,960 ft.; reamed 16-in. hole to 2,263 ft.

Continental Oil Co.'s No. 9 Whiteside, 3,680 ft. S of N line and 1,072 ft. W of E line, Sec. 7-33-76.
Drlg. 4,972 ft.

Otto Olson et al's No. 1 Carey, Sec. 6-32-71.
S.D. 642 ft.

John Ackard's No. 1 Daniels, SW SW SE Sec. 17-32-71.
S.D. 2,600 ft.

Crook County

Dr. R. B. Kinters' No. 1 Rockfort-Wyoming, CNL NE SE Sec. 13-52n-62w.
T.D. 1,337 ft.; trying to loosen 5 3/16-in at 1,305 ft. and lower W.S.O.

Fremont County

Mid-American Oil Co.'s No. 3 Government, NW NE SW Sec. 24-28-92.
T.D. 800 ft.; cmtd. whipstock to sidetrack.

Monongahela Oil Co.'s No. 1 Wisda, NE SE SE Sec. 13-28-93.
Fishing for drill pipe 4,515 ft.

Nelson & Poupiert's No. 3 Enos, Lot 7, Sec. 27-3n-1w.
Drlg. 921 ft.

Hot Springs County

Argo Oil Co.'s No. 1 Rathvon-Government, NE SW NW Sec. 14-44n-98w.
Drlg. 1,670 ft.

California Exploration Co.'s No. 2 Government, NW SW NW Sec. 7-44-96.
S.D. for wtr. 2,518 ft.

Ohio Oil Co.'s No. 72 Millsiron Cattle Co., NE SE SE Sec. 19-46n-98w.
Rigging up.

Oscar G. Grace's No. 1 Government, SW NW NW Sec. 21-43-92.
Drlg. 600 ft.

Lincoln County

Senrab Oil Co.'s No. 3 Government, N SE NW Sec. 10-26-113.
S.D. 1,011 ft.

Superior-Wyoming Oil Co.'s No. 2-B, Lot 3 (NW NW), Sec. 3-26n-113w.
T.D. 703 ft.; cmtd. pipe; W.O.C.

Niobrara County

The completion of several large wells in Lance Creek in the past few months in the Sundance formation is resulting in an influx of oil men, royalty dealers and investors and the hotels at Lusk and nearby towns have enlarged their facilities to take care of the increased business.

The Continental Oil Co. has an application for a permit to build a pipe line from the field to Manville pending before the Wyoming Public Utilities Commission. The Illinois Pipe Line Co., which operates a common carrier line to Lusk, filed a protest against the granting of the permit on August 13.

Argo Oil Co.'s No. 4 Elliott, C NE NW Sec. 5-35n-65w.
T.D. 3,828 ft.; flowed 20 bbls. an hr. through 27/64-in. choke on 2½-in. with 6,000,000 ft. of gas; W.O. separator.

Black Hills Ref. Co.'s No. 1 Wright, SE SE SW Sec. 23-36-94.
Derrick; W.O. rotary equipment from California.

Continental Oil Co.'s No. 5 Rohiff, 550 ft. E of W line and 580 ft. N of S line, SW Sec. 31-36n-65w.
Drlg. 3,073 ft. in shale, lime and sand.

J. H. Huber Co.'s No. 1 Joss, NE NE NW Sec. 6-35n-65w.
Spudding at 249 ft.

Interstate O. & R. Co.'s No. 1 Morrell, NW NE SE Sec. 9-39-61.
T.D. 3,030 ft.; P.B. to 2,835 ft.; S.D.

Fall River Royalty & Producers Co.'s No. 5-L Briggs, CSL NE NE Sec. 2-39n-61w.
Drlg. 300 ft.

Ohio Oil Co.'s No. 5 Converse Sheep, C SE SW Sec. 32-36n-65w.
Rig up.

Ohio Oil Co.'s No. 7 Lamb, C NW NE Sec. 5-35n-65w.
Rig up.

Ohio Oil Co.'s No. 4 Putnam, C SW SW Sec. 33-36-65.
Topped first Sundance at 3,699 ft.; coring at 3,700 ft.

Riggs Drlg. Co.'s No. 1 Spaugh, NW NW SE Sec. 5-33n-65w.
Spudding.

S. & H. Dev. Co.'s No. 1-A Olinger, SE NE NW Sec. 1-36-63.
Drlg. 1,627 ft.

Park County

Continental Oil Co.'s No. 4 Northern Pacific, NW NE SE Sec. 23-58n-95w.
Location.
Geo. T. Beck's No. 1 fee, NW SE NW Sec. 27-33-101.
T.D. 1,335 ft.; 300 ft. oil in hole; testing.
Garland Oil Co.'s No. 2 Government, SE NE NW Sec. 14-56-98.
S.D. 2,160 ft.
Resolute Oil Co.'s No. 1 State, C NW SW Sec. 16-57-101.
S.D. 3,608 ft.

Sheridan County

Beaver Creek Oil Synd.'s No. 1 Allison, SW SE Sec. 15-55-85.
S.D. 2,660 ft.

Sublette County

Texas Co.'s No. 6-K, Sec. 34-27n-113w.
Drlg. 625 ft.
Piney-LaBarge Oil Co.'s No. 2 Government, CEL NE NW Sec. 18-28-113.
Drlg. below 520 ft.

Sweetwater County

Vermillion Oil Co.'s No. 1 Government, SW SW SW Sec. 7-12n-99w.
Moving in material.
Wyoming-California Pet. Co.'s No. 1 Government, SE cor. Sec. 20-16-104.
Testing gas show 2,395 ft.
Sinclair Wyoming Oil Co.'s No. 1 U.S.P. Lease, SW SE NW Sec. 10-26n-90w.
Fishing for csg. 442 ft.

Uinta County

General Pet. Corp. of Utah's No. 1 Union Pacific-Hayes, SW NW SW Sec. 29-14n-118w.
Drlg. 1,435 ft.

Washakie County

Ariton & Doyle's No. 1 Government, SW SW SE Sec. 29-48n-91w.
Drlg. 150 ft.
Nystrom & Smoot's No. 2 State, SW NE NE Sec. 36-48n-90w.
Drlg. 1,738 ft.
Wyoming O. & R. Co.'s No. 1 Frison, NW SW NW Sec. 14-48-91.
Drlg. 1,710 ft.

Weston County

One completion and one dry hole were reported in the Osage Field. Karl Kundy's No. 9, NW cor. NE Section 31-46-63, made 18 bbls. on the pump from sand at 1,370-78 feet and 1,400-07 feet. Herbison & Son's No. 4 Draper, NW cor. Section 22-46-63, was dry at 185 feet, total depth. Osage production in July was 16,571 bbls. gross, and deliveries to refineries totaled 16,657 bbls.

Conway Oil Corp.'s No. 1 Government, C SE NW Sec. 7-41-60.
Fishing for tools 2,087 ft.
Federal Oil Co.'s No. 3 Government, C NE SE Sec. 15-46n-64w.
Location.
Beaver Creek Oil Synd.'s No. 1 State, C NE NE Sec. 23-44-63.
Spudded and S.D.
Des Moines-Osage Synd.'s No. 10, NE NE NE Sec. 25-36n-64e.
Drlg. 1,200 ft.
Herbison & Son's No. 5 Draper, CNL NW NW Sec. 22-46n-63w.
Drlg. 100 ft.
La Licishe Oil Co.'s No. 18 fee, C SW SW Sec. 17-46-63.
S.D. for repairs.
L. C. Packham's No. 1, NW NW NW Sec. 19-46n-63w.
Resumed at 450 ft.; R.U. to run 8¼-in. to bottom.
Albert Jones' No. 10 Bock, CSL NW NE Sec. 21-46n-62w.
Drlg. 500 ft.

MONTANA

Big Horn County

Daniels Pet. Co.'s No. 1 May, C SE SE Sec. 13-1s-32e.
Drlg. 2,250 ft.
Enterprise Oil Co. et al's No. 2 Lynde, SW SW SE Sec. 21-6s-35e.
Drlg. 2,700 ft.

Carbon County

Bailey Round Butte Oil Co.'s No. 1, 1,120 ft. W of E line and 3,140 ft. N of S line, Sec. 2-4s-23.
Drlg. 1,416 ft.

Cascade County

C. Leonard Smith's No. 1, NE NE SW Sec. 14-22n-2e.
Fort Worth spudder on location.

Choteau County

Mills & Decker's No. 1, NE NW Sec. 29-27n-12e.
Rig up.

Fallon County

Montana-Dakota Utilities Co.'s No. 1, NE NW Sec. 17-3n-62e.
Spudding.

Fergus County

Button Butte O. & G. Co.'s No. 1 Woodward, SE SE SW Sec. 20-14n-24.
Drlg. 3,095 ft.
Emmons et al's No. 1, 220 ft. W of E line and 2,140 ft. N of S line, Sec. 6-20-18.
Drlg. 1,405 ft.
S. W. Pennock et al's No. 1 Nordheim, NW NE NE Sec. 6-21n-18e.
S.D. 480 ft. (corrected).
E. A. Penholt's No. 1, NW NW SW Sec. 24-21n-17e.
Rigging up.
Judith Operating Co.'s No. 1 Government, C SW SW Sec. 26-22n-17e.
Drlg. at 400 ft.

Gallatin County

Montana Gas & Pet. Corp.'s No. 1 Adams, SE SE SE Sec. 36-2n-1e.
S.D. 2,400 ft.
Ben W. Ryan's No. 1 Tice, NE NE NE Sec. 28-1n-2e.
Drlg. 2,597 ft.

Glacier County

Five completions, all in proven territory, were made in the Cut Bank Field. There were three first reports. The best completion and a larger well than the average is the Santa Rita Oil & Gas Co.'s No. 1 Stahl, C NE SE Section 20-33-5w, in the southern part of the pool. It swabbed 250 bbls. the first 16 hours at 3,002 feet, total depth, and probably will flow. Oil rose 2,400 feet from the upper sand at 2,925-44 feet and the lower sand at 2,976-96 feet.

The Olive Oil Co.'s No. 4 Winkler, 725 feet south of CNL Section 35-35-6w, swabbed 48 bbls. the first 48 hours from sand at 2,862-78 feet. Total depth is 2,910 feet.

Texas Co.'s No. 1 Small, C NW NE Section 23-35n-6w, pumped 30 bbls. initial from the pay at 2,810-26 feet. Total depth is 2,845 feet.

R. C. Tarrant's No. 2 McClellan, C NW SE Section 12-34-6w, is a small well, the oil rising 400 feet from sand at 2,725-61 feet.

Left to right: C. S. (Doc) Cook, tool pusher for Noble Drilling Co., in charge of Diesel electric drilling rig, in the Hobbs, New Mexico, area, and C. J. McCoy, electrical engineer, Noble Drilling Co.

C. P. Castle's No. 3 State, C NW SW Sec. 36-35-4w.
Rig.
Chas. Grant's No. 1 Askins, Lot 24, Blk. 33, Sec. 12-32-6w.
T.D. 2,700 ft.; sidetracking at 1,650 ft.
Consolidated Gas Co.'s No. 10 Tribal, Lot 6 (SW SW NE) Sec. 34-35-4w.
Rigging.
Consolidated Gas Co.'s No. 2 State, C NW SE Sec. 26-35-6w.
Cmtd. 7-in. at 2,752 ft.
Consolidated Oil Co.'s No. 9 Tribal, Lot 5 (SW NW NE) Sec. 34-35-4w.
Spudding 200 ft.
Custer Oil Co.'s No. 1 Tweedy, 440 ft. from W line and 330 ft. from N line, NE Sec. 36-32n-6w.
Drlg. 2,760 ft.
Fowler et al's No. 1 Tweedy, SW SE SE Sec. 25-33-6w.
Moving in material (first report).
Goodstein & Smith's No. 1 Olson, C NE SE Sec. 26-34-6w.
T.D. 2,810 ft.; fishing for tools.
L. R. Hannah, tr.'s No. 2 State, 93 ft. from E line and 158 ft. from N line, Sec. 12-33n-6w.
Spudding. 150 ft.
L. R. Hannah, tr.'s No. 1 Thacker Bond & Mtg., C NW NW Sec. 27-32-5w.
Moving in material.
R. C. Jeffries' No. 3 Lukens, 360 ft. N of S line and 1,540 ft. S of E line, Sec. 1-33n-6w.
Drlg. 2,000 ft.
Montana Headlight Oil Co.'s No. 2 Britton, 660 ft. E of W line and 440 ft. N of S line, SE Sec. 11-34n-6w.
Drlg. 2,820 ft.
Montana Power Gas Co.'s No. 1 Colburn, C SE SW Sec. 5-33n-5w.
Drlg. 2,660 ft.
Montana Power Gas Co.'s No. 1 Reagan, 660 ft. W of C Sec. 28-35-5w.
Rig (first report).
Montana Power Gas Co.'s No. 1 Hall, C SW SE Sec. 35-35n-6w.
Drlg. 560 ft.
Santa Rita O. & G. Co.'s No. 2 Government, SW NE SE Sec. 32-35n-5w.
Moving in material (first report).
Santa Rita O. & G. Co.'s No. 2 McCabe, NW SE NE Sec. 31-33-5w.
Location.
R. C. Tarrant's No. 4 Miller, C SE NE Sec. 24-34n-6w.
Location.
R. C. Tarrant's No. 2 Getty, NW NW SE Sec. 2-34-6w.
T.D. 2,700 ft.; will skid rig.
R. C. Tarrant's No. 4 Britton, C SW SW Sec. 12-34-6w.
Drlg. 1,730 ft.
R. C. Tarrant's No. 6 Haglund, Jr., C SE NW Sec. 12-34-6w.
Colo. at 463 ft.; 10-in. at 480 ft. with 50 sacks.
R. C. Tarrant's No. 2 Larson, C W½ W½ NE Sec. 12-34-6w.
Drlg. 1,590 ft.
R. C. Tarrant's No. 2 Yunck, CEL NW Sec. 12-34n-6w.
Rigging.
Texas Co.'s No. 2 Peterson, C SW Sec. 23-36n-5w.
Stdg. cmtd. at 2,795 ft.
Texas Co.'s No. 1 Mueller, CWL SW SW Sec. 2-35n-6w.
Drlg. 865 ft.
Texas Co.'s No. 1 Section 9 Unit, C NW SE Sec. 9-32n-5w.
Stdg. cmtd. at 2,938 ft.
Texas Co.'s No. 1 Tweedy, C N½ NE Sec. 21-35n-6w.
T.D. 3,012 ft.; C.O.
Texas Co.'s No. 3 Kearns, C NE NW Sec. 23-35n-6w.
Drlg. 1,460 ft.
Watson & Kistner's No. 1 Britton, C SE SE Sec. 14-34n-6w.
Drlg. 1,900 ft.

Hill County

Independent Natural Gas Co.'s No. 1 Morphey, CEL SW SW Sec. 14-32n-17e.
Moving in material (first report).

Phillips County

Little Rocky Dev. Co.'s No. 1, SE SE SE Sec. 17-24-24.
S.D. to finance at 352 ft.

Pondera County

Wm. M. Fulton's No. 1 Erickson, SW SW NW Sec. 10-27n-4w.
T.D. 500 ft.; fshg. for jars.
Norden Corp., Ltd.'s No. 1 Hollan, NW NW NW Sec. 12-28n-6w.
S.D. 500 ft. to comp. leasing.
Texas Co.'s No. 1 Unit, C SW SW Sec. 3-30-5w.
C.O. 2,540 ft.

Stillwater County

Continental Oil Co.'s No. 1 Parker, 500 ft. N of S line and 660 ft. E of W line, SE Sec. 25-5s-17e.
Cellar and pits.

Toole County

Two completions and four new operations were reported in the Kevin-Sunburst Field.

Graham Oil Co.'s No. 3 McDonald, CEL SW SW Section 19-35-2w, made 40 bbls. initial from the pay at 1,520-29 feet.

Imperial-Craig Oil Co.'s No. 1 Martin, SW SE SE Section 18-35-1w, made 40 bbls. initial before acidizing from the contact at 1,618-57 feet.

A. Beardsley's No. 3 Swears, SE SE NW Section 9-35-2w, reported suspended two weeks ago when the Sunburst at 1,410-25 feet was found dry, was deepened to the contact at 1,653-67 feet and completed as a producer, swabbing 40 bbls. the first day.

Coolidge & Coolidge's No. 2 Government, SW NE SE Section 35-36-2w, reported a completion for 50 bbls., proved a much better well when tested and swabbed 186 bbls. in 24 hours.

A. C. Crumley's No. 7 Shaw, NE NE SE Sec. 35-36n-2w.
Location (first report).
Cassidy and Cassidy's No. 1 Veitch, 220 ft. W of E line, 660 ft. N of S line, Sec. 31-35n-2w.
Sunburst at 1,305-40 ft.; est. at 8 to 10 bbls.; drlg. deeper.
P. L. Eddy's No. 5 Seabrook, NE SW SW Sec. 19-35-2w.
Acidizing; contact at 1,528-65 ft.
Imperial-Craig Oil Co.'s No. 17 Bloom, Sec. 19-35n-1w.
Drlg. 515 ft.
Fred R. Mauger's No. 1 Government, SW NE NW Sec. 13-35-2w.
Moving in material.
Monopeg Oil, Ltd.'s No. 3 Dipple, S SW NW Sec. 28-35-1w.
Sidetracked tools 1,335 ft.
Mon-Tex Pet. Co.'s No. 1 fee, NW SW Sec. 27-34-1w.
Drlg. 1,700 ft.
Potlach O. & R. Co.'s No. 6 fee, SE SE SW Sec. 21-34n-1w.
Drlg. 1,088 ft.
Montana Power Gas Co.'s No. 7 McGowan, SE SE SE Sec. 3-35n-2w.
Rigging (first report).
New Era Fuel Co.'s No. 2 Halter, NE NW NE Sec. 21-35n-2w.
Drlg. 830 ft.; (first report).
Pfabe & Engleking's No. 9 Government, NW SW SE Sec. 19-35n-2w.
Rigging; (first report).
E. O. Reickhorr's No. 2 Government, SW SW NE Sec. 3-35-3w.
Drlg. 500 ft.
C. Leonard Smith's No. 1 Eckhoff, C SE Sec. 6-33n-2e.
S.D. 575 ft. for new boiler.
C. Leonard Smith's No. 1 Federal Land Bank, C NE SE Sec. 11-33n-1e.
Spudding at 175 ft.
C. Leonard Smith's No. 1 L. Halverson, C NE SE Sec. 18-33n-2e.
Drlg. 1,000 ft.; showing 1,000,000 ft. gas.
C. Leonard Smith's No. 1 H. Halverson, NW NE Sec. 18-33n-2e.
Rigging up rotary 250 ft.

UTAH

Grand County

Columbia Crude Co.'s No. 1 Balsey, SW SE Sec. 12-25s-20e.
Spudding.
Utah Southern Oil Co.'s No. 1 Hyde, SE NW NW Sec. 3-22s-22e.
R.U.; moving in tools.

Summit County

Longwell Pet. Co.'s No. 1, SE SW SE Sec. 35-3n-5e.
Resuming at 850 ft.; trying to U.R. 10-in. to bottom to shut off wtr.

Utah County

Diamond Oil Co.'s No. 4 Government, CSL SE NW Sec. 16-8s-5e.
Drlg. 2,746 ft.

Washington County

Arrowhead Pet. Co.'s No. 2 Escalante, NW NW NE Sec. 19-43-15.
T.D. 4,114 ft.; P.B. to 3,250 ft.; shot and C.O.
Arrowhead Pet. Co.'s No. 1-A, SE SW NE Sec. 1-42-15.
Drlg. 1,665 ft.

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Among Gulf Coast Drilling Contractors

Cron & Gracey, in addition to the nine rigs previously reported, have started a rig for the Shell Petroleum Corp. in the Iowa, Louisiana, field.

W. V. (Bill) Bowles is setting up to drill No. 18 Houston Oil Field Association for the Texas Co. in the Manvel Field, Brazoria County.

Whitman Drilling Co., Houston, has completed a well in the Port Lavaca Field for Steinberger Petroleum Co.

L. O. Gleason, San Antonio drilling contractor, is drilling No. 1 Maggie Fitzpatrick on a 3,000-acre block in Duval County obtained from S-R-C Oil Corp. of San Antonio. Location is on the Maggie Fitzpatrick ranch, located in the Manuel Charo, Macimo Bernal and Sally Renshaw Surveys, drilling site being 2,000 feet west of the east line and 1,500 feet south of the Nueces River. This wildcat is 15 miles north of Loma Alta, 8 miles south of Tilden, in McMullen County, and 12 miles southwest of Calliham. Sands anticipated are the Government Wells, Mirando, Pettus and Yegua. Test, which is for Phillip Shumway and L. O. Gleason, is scheduled to go to 2,100 feet. Mr. Shumway, until recently associated with Steen Drilling Co., resigned to give more attention to his own interests in the oil country.

Smith & McDannald are drilling below 6,700 feet on a well for Shell Petroleum Corp. at Louise, Wharton County; are drilling below 3,000 feet on No. 3 Grote for Stanolind Oil & Gas Co. at Hastings; are drilling below 4,000 feet on No. 2 Gibson for the same operators at South Houston; have completed No. 1 Burkitt as a gas and distillate well for Tide Water and Texas Seaboard Oil companies at Cayuga, and are moving the rig to drill No. 1 Johnson in the same field for the same operators; have set oil string in No. 1 Goode for the same operators in the same field; have started up on No. 1-B Garrett for the Pure Oil Co. at Louise; are reworking No. 2 Weaver for the same operators in the same field; have set surface pipe at Big Hill, Chambers County, for Stanolind Oil & Gas Co., and are preparing to drill a 9,000-foot test near St. Martinsville, La., for an operator to be announced later.

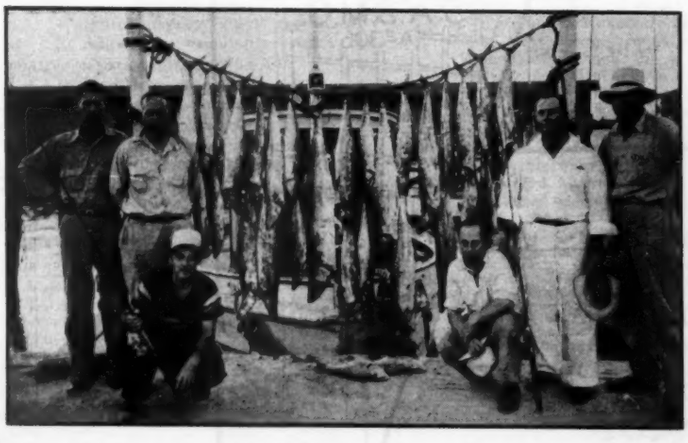
Jordan Drilling Co. has plugged and abandoned at 3,520 feet a test drilled near Shiro, Grimes County, for the contractors, Dave Wallace and others.

Neuhas Drilling Co. has drilled the plugs on a well for E. L. Smith Oil Co. in the Placedo Field, a drill stem test on which indicated it would make one of the best wells in the field. The rig will be moved to a new location in the same field for the same operators. Contractors are working over a well for J. L. Collins in the Sam Fordyce Field, and have a new location to drill there for the same operator as quickly as the workover job is completed.

L. W. Capps is drilling below 3,500 feet on a well for Jack Porter in Austin County; is drilling below 3,200 feet on a well for Mid-Tex Oil Co. near Willis, Montgomery County; and has set 1,300 feet of 10¾-inch surface pipe in a well for the Crown Central Petroleum Corp. in the Port Lavaca Field.

Talbot Drilling Co., on a drill stem test from 3,700-61 feet in a well for Donday Oil Co., had a show of 70 pounds of gas pressure and 2 fourbles of fluid through a one-quarter inch choke at the top. Test will be carried to the Saline Bayou formation. At Conroe, Talbot is drilling below 2,800 feet on a wildcat for Ellis Arline and others.

George Echols is drilling below 4,500 feet on a well for Sun Oil Co. at Placedo; is drilling on a well for the same operators in Duval County, and is waiting on orders on a well for the Uscan Oil Co. in the Manvel Field, Brazoria County.



Some members of a recent fishing party given by Texas Electric Steel Casting Co., 50 miles offshore from Galveston, Tex., on which the catch totaled 732 pounds. Left to right: Lee Hewitt, superintendent, American Iron & Machine Works; C. W. Shartle, Texas Electric Steel Casting Co.; R. R. Grove, superintendent, Cameron Iron Works; A. Henderson, superintendent, J. H. McEvoy & Co.; Earnest Barker, president, Atlas Engineering Works; and Otto G. Keil, Gulf Engineers.

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ANAHUAC FIELD EXTENSION; ABANDON EASTERN OUTPOST

By
F. L. SINGLETON

HOUSTON, Tex., Sept. 2.—Another extension was marked up for the Anahuac Field, northern Chambers County, when Humble Oil & Refining Co. completed No. 1 Engels at a total depth of 7,085 feet for an initial production of 31 bbls. per hour through a one-quarter inch choke, with tubing pressure 1,150 pounds and casing pressure 1,200 pounds. Based on the top of the oil sand topped at 6,883 feet, it is only 8 feet lower than the company's No. 3 Middleton to the southwest, the highest well in the field, consequently production is expected to extend over a wide area in this direction.

It is on a 240-acre tract, one-half mile northeast of production in Section 50, H.&T.C. Survey, and its completion requires the company to drill five additional wells on the tract recently purchased from Rycade Oil Corp. for a cash consideration and an oil payment to be paid out of the other five wells.

Outpost Abandoned

While the test was being completed for a producer, the company's No. 3 Clark, an outpost test on the east side of the field in Section 57, H.& T.C. Survey, was being abandoned after it had cored salt water sand to a total depth of 7,243 feet. The salt water sand was encountered at 7,212 feet and the only showing encountered was a gas show from 7,000-08 feet. This is the first dry hole recorded in the field and it definitely establishes the existence of a fault, believed to extend in a northwest-southeast direction from the test. It topped the Discorbis at 6,112 feet, Heterostegina at 6,470 feet and Marginulina at 6,829 feet. Northwest of the dry hole in Section 56, H.&T.C. Survey, No. 1-B Middleton topped the oil sand at 7,090 feet and is bottomed in sand at 7,100 feet with 7-inch casing cemented at 7,084 feet. Discorbis was topped at 6,216 feet, Heterostegina at 6,313 feet and Marginulina at 6,740 feet. Based on the latter marker it is 89 feet higher than the dry hole.

In the north extension area recently opened by R. A. Mason and others' No. 1 White, Sun Oil Co. is preparing to complete No. 1 White at a total depth of 7,075 feet. The oil sand was topped at 7,007 feet and it is standing with 7-inch casing cemented at 7,030 feet. Discorbis was picked up at 5,955 feet, Heterostegina at 6,511 feet and Marginulina at 6,660 feet. It is about normal with the Mason test which offset the well to the north. Northeast of this immediate area about 1 mile, Humble Oil & Refining Co. added additional acreage to its holdings by purchasing a half interest in 600 acres for a reported cash consideration of $300,000 and an oil payment of $300,000. The acreage was purchased from Hill and Hill and is in Section 43, H.&T.C. Survey, Section 42, E. C. Ellis Survey, Section 67, T.&N.O. Survey and Section 66, R. D. Ryel Survey.

Victoria County

Southwest of the Coleto Creek Field, Victoria County, considerable interest is centered on Texas Co.'s No. 1 J. J. Warden after it cored sand showing gas from 4,490-95 feet and tested two joints of mud with 235 pounds of working pressure on a five-minute drill stem test from 4,-486-4,514 feet. The operators made an electrical coring test of the hole and the well is shut down awaiting orders. Location is in the Edward McDonough Survey, about 5 miles from the Coleto Creek Field.

Calhoun County

One of the best wells to be completed in the Port Lavaca Field, Calhoun County, was made by Steinberger Petroleum Co. when it completed No. 3 Shofner at a total depth of 6,242 feet for an initial production of 650 bbls. per day through a one-quarter inch choke with tubing pressure 1,400 pounds and casing pressure 1,600 pounds. Location is 466 feet out of the southwest corner of a 100-acre tract in the M. Sanches Survey. The company is skidding the derrick over for No. 1 Hartman, 466 feet out of the southwest corner of the tract in the M. Sanches Survey. Approximately 7 miles south of the field, Crown Central Oil Co. is reported to have made arrangements to test its block of 4,500 acres that centers around Section 24, in the Benito Morales Survey.

Galveston County

At the Dickinson Field, Galveston County, Stanolind Oil & Gas Co. finished No. 1 State on the River Bed lease for an initial production of 163 bbls. in 12 hours through a one-quarter inch choke with tubing pressure 1,500 pounds and casing pressure 1,-575 pounds. It was completed in the Frio sand at 8,115 feet with 7-inch casing cemented at 8,113 feet. Production was obtained through perforated casing from 8,037-54 feet. Pure Oil Co.'s No. 2 Shelor, north of its No. 1, a distillate producer in the B.B.B.&C. Survey, is coring after a 47-minute drill stem test from 8,094-8,110 feet tested 15 thribbles of fluid, 90 per cent of which was salt water.

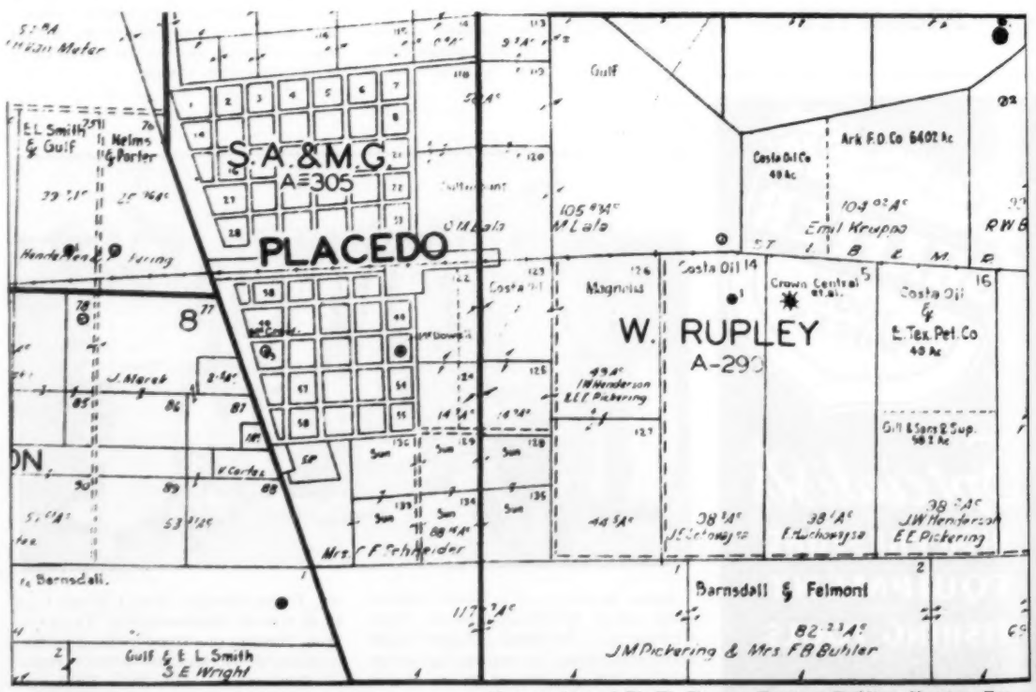
Hardin County

On the south flank of the Baston Dome, Hardin County, one abandonment and one producer was completed in the deep pay. Both tests were completed by John Deering and others. Their No. 1 Cruse was completed at a total depth of 5,150 feet for an initial production of 8 bbls. per hour through a one-quarter inch choke with tubing pressure 425 pounds and casing pressure 375 pounds. Seven-inch casing was cemented at 5,008 feet. No. 1 Conzelman was originally drilled to 6,214 feet and was plugged back, sidetracked and redrilled to 4,134 feet, where it was abandoned after it tested salt water. Texas Co. made location for a deep test by striking No. 1 Christian fee 100 feet from the west line and 350 feet from the north line of a 26.45-acre tract in the W. Donoho Survey.

Harris County

Stanolind Oil & Gas Co.'s No. 1 First National Bank, 1¼ miles north of the discovery well in the South Houston district, Harris County, was brought in the first part of the week flowing 10 bbls. per hour through a one-quarter inch choke showing very little pressure. Late in the week it had stopped flowing and the operators were swabbing it in an attempt to bring it back on production. So far it has the appearance of being an edge well and may be deepened in attempt to find a deeper sand. It is in the Callahan and Vince Survey. The discovery well being drilled deeper is below 5,405 feet in sandy shale.

The suit attacking the 16-acre spacing rule put in effect by the Railroad Commission at South Houston was held at Houston August 30 before a three-judge federal court and after all arguments were heard, the court took the case under advisement and will announce its decision at a later date. The suit was brought



—Map courtesy of W. W. Zingery, Esperson Building, Houston, Tex.

Section of the Placedo Field, Victoria County, showing recent extensions and locations

against the Railroad Commission and the city of South Houston by Tysco Oil Co. of Dallas which is attacking the spacing rule as unreasonable, arbitrary and confiscatory. The 16-acre spacing rule was laid down by the city council of South Houston and was later adopted by the commission.

Liberty County

Gulf Production Co. was preparing to test its No. 10-C Kirby in the Cleveland Field, Liberty County, after coring oil and gas sand from 5,829-34 feet, the total depth. On a 15-minute drill stem test from 5,646-74 feet it tested 15 feet of drilling mud and 15 feet of distillate with 700 pounds pressure. It is in the John Pleasant Survey.

Placedo

In the southwestern part of the Placedo Field, Victoria County, E. L. Smith and Gulf Production Co.'s No. 1 Lela looms as making one of the best wells in the field and the second to be completed in the deep pay bottomed at 6,011 feet. On a drill stem test from 6,001-11 feet, the operators recovered 3,000 feet of oil and 150 pounds of pressure in 22 minutes. Five-inch casing is being run and it should be tested late in the week. Since the field was discovered a few months ago, a number of tests have been drilled in search of the deep pay, but all have been completed in the Discorbis formation at approximately 4,700 feet and have not proven to be as good as the discovery well.

Wharton County

Texas Co. marked up its second producer for the new Pickett Ridge Field in central Wharton County when it completed No. 3-A Pierce, 1,320 feet northeast of the discovery well, for an initial production of 16 bbls. per hour through a sixteen-sixty-fourths inch choke, with 500 pounds working pressure. It is bottomed in oil sand at 4,710 feet, with 7-inch casing cemented at 4,702 feet.

In the northeastern part of the county, Sterling Oil & Refining Co.'s No. 1 Frank Janik, a wildcat test in the Johathan Scott Survey, is coring in salt water sand below 7,300 feet. It topped the Cockfield at 6,865 feet and the Yegua sand at 7,176 feet.

COASTAL LOUISIANA

Attention in Coastal Louisiana was centered on the Bayou St. Dennis Field, Jefferson Parish, where Texas Co. is preparing to complete two deep producers below 9,500 feet. Its No. 1 Rigolet Co-operative Fur Trapping Co., a south offset to the discovery, in Section 30-17s-24e, is bottomed in sand at 9,568 feet with 9⅝-inch casing cemented at 9,506 feet. An electrical coring test was made of the hole and showed 30 ohms and 110 millivolts from 9,507-21 feet. West of the discovery, in Section 19-17s-24e, the company was preparing to make a drill stem test on No. 2 Bayou St. Dennis, bottomed at 9,633 feet. On an electrical coring test it showed 13 ohms and 100 millivolts from 9,591-9,608 feet and from 9,608-40 feet.

In the Gillis Field, Calcasieu Parish, two producers and one abandonment were recorded. Union Sulphur Co. completed No. 2 Mayo-Reeves at a plugged back depth of 6,699 feet for an initial production of 436 bbls. per day through a one-quarter inch choke. Its No. 3 Mayo-Reeves was also completed at a plugged back depth of 6,676 feet for an initial production of 514 bbls. per day through a twenty-sixty-fourths inch choke. Both tests are in Section 12-9s-8w. The abandonment was made by Texas Co. on its No. 4 Nickerson which was quit at 6,957.

Amerada Petroleum Corp. is moving in material for No. 1 Wells Land Co., a wildcat test in the northwestern part of Rapides Parish. It is 490 feet from the west line and 2,450 feet from the south line of Section 53-1s-2e, about 4 miles north of the town of Haasville.

On the Henderson Prospect, St. Martin Parish, Texas Co.'s No. 7 St. Martin Land Co. is drilling in shale below 8,614 feet. It is in Section 17-8s-7e. Derrick is being built for No. 1 State-Mongoulois, southwest of the above test in Section 10-10s-9e.

In the Roanoke Field, Jefferson Davis Parish, Shell Petroleum Corp.'s No. 1 Jarnigan is coring in shale below 10,729 feet with no additional showing being reported. Humble Oil & Refining Co.'s No. 1 Thomas Nelson is bottomed at 10,583 feet in sandy shale and is fishing for 7-inch casing which pulled out of the bradenhead. The company's No. 4 Devilbiss in Section 1-9s-4w, was abandoned at 9,233 feet.

Shell Petroleum Corp.'s No. 1 White Castle Shingle Co., in the White Castle Field, Iberville Parish, was completed at 5,165 feet for an initial production of 596 bbls. per day through a twenty-sixty-fourths inch choke, with tubing pressure 345 pounds and casing pressure 465 pounds. It is in Section 12-11s-3e.

Crude Stocks Decline

Stocks of domestic and foreign crude petroleum at the close of the week ending August 17 totaled 311,515,000 bbls., a net decline of 1,878,000 bbls.

Daily average imports were 146,000 bbls. Daily average crude runs were about 2,770,000 bbls.

1. Fifty-five companies hold 96 per cent of total stocks (334,757,000 bbls. on June 30, 1935).

2. Ten companies hold 76 per cent of total stocks.

3. Weighted average days' supply (exclusive of line fill) of 25 leading companies as of June 30, 1935, was 157.

4. Weighted average days' supply of five important companies with relatively large stocks was 180.

5. Weighted average days' supply of five important companies with relatively little storage was 45.

6. If the average in (5) is accepted as the proper level for all companies, theoretical working stocks are about 175,000,000 bbls. (including 25,000,000 bbls. line fill), or about 150,000,000 bbls. below the present level.

STOCKS OF CRUDE PETROLEUM
AUGUST 10 AND 17, 1935

(Thousands of barrels of 42 gallons)

Grade of crude oil—	Aug. 10	Aug. 17
Pennsylvania Grade	4,865	4,923
Other Appalachian	899	879
Lima-NE Ind.-Mich.	1,385	1,423
Ill.-SW Ind.	11,469	11,411
N. La. and Ark.	10,638	10,846
W. Tex. and SE N. Mex.	31,096	30,745
East Texas	26,222	25,550
Other Mid-Continent	141,033	140,161
Gulf Coast	24,883	24,456
Rocky Mountain	27,418	27,360
California	29,436	29,594
Domestic crude	309,344	307,348
Foreign crude	4,049	4,167
Total*	313,393	311,515

*Represents approximately 98 per cent of total stocks in the United States, exclusive of producers' stocks.

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Eastern Field Report

By STAFF CORRESPONDENT

DEEP TEST IN WEST VIRGINIA SHOWING AS GOOD GAS WELL

PITTSBURGH, Pa., Sept. 2.—Another Oriskany test in West Virginia is showing for a good gas well. In Malden district, Kanawha County, the Columbian Carbon Co. passed through the top of the Oriskany sand on the W. D. Lewis farm at a depth of 4,624 feet. At 4,625 feet there was a showing of about 100,000 feet a day, which increased as the bit deepened, until at 4,631 feet it had 897,000 feet a day, natural. The test is still drilling.

This test is about 1½ miles northeast of the Oriskany sand gas well on the Campbells Creek Coal Co., Godfrey L. Cabot, Inc.'s No. 8, and is on Right Fork of Coal Fork of Campbells Creek. It is about 500 feet north of the Kate C. Smith farm on which the South Penn Oil Co. is drilling farther west and south, which adds to the possibilities of this test. It is at present 1,500 feet deep.

In this district, Godfrey L. Cabot, Inc., has reached the Oriskany sand in the test on the northern part of the Campbells Creek Coal Co. lease and is testing the formation. On the Pius R. Levi farm this operator is drilling at 4,755 feet and has a rig standing on his lease on the W. D. Lewis farm.

In Elk district, the test of Columbian Carbon Co. on the G. and D. Copenhaver farm on Little Sandy Creek, reported as a 2,600,000-foot gas well in the Oriskany sand at a depth of 4,831 feet and a total depth of 4,842 feet, has been tested and has a rock pressure of 1,950 pounds. The test of Yoak Oil & Gas Co. on the W. T. and J. H. Goshorn farm, which showed 107,000 feet of gas in the top of the Oriskany sand, is shut in waiting on casing to complete the hole. No hole was made in the Benedum & Trees test on the Mary C. Wingfield farm, which is shut down at 4,703 feet.

In Loudin district, Kanawha County, Godfrey L. Cabot, Inc., is drilling at 1,275 feet on the A. F. Vorholt farm. Columbian Carbon Co. is down 3,800 feet on the Kanawha City Co. lease.

Operations

There were 22 completions and four dry holes in the lower Eastern fields during the week. Nine were gas wells, two being large, and 13 were producers with an initial production of 196 bbls., most of which is accounted for by two wells in Southeast Ohio.

SOUTHEAST OHIO

The South Penn Oil Co. has notified all Ohio producers with whom they have contracts for all oil as run as follows: "We regret to advise you that there is no change with respect to the market of Pennsylvania Grade crude in the Buckeye Pipe Lines Co. lines. Therefore, we are compelled to solicit your continued co-operation during the month of September to the same extent requested in our letter of July 18, namely 50 per cent of June, 1935, runs." This curtailment to 50 per cent of normal, while a severe blow to the producers in that field, was made necessary by the fact that few refineries run Buckeye Pennsylvania Grade crude due to the difference in the filtering process and the balance between production and consumption, heretofore maintained, was upset with the withdrawal from the market of one of the larger buyers.

The best well for the week in Southeast Ohio was a large gas well in Muskingum County. In the SE Section 9, Brush Creek Township, Hopewell Fuel & Gas Co. completed a second test on the Albert Dozer farm in the Clinton sand at a depth of 4,140 feet. It gauges 8,500,000 feet a day.

There were also two fair producers in Muskingum County. In the SW Section 5, Licking Township, H. W. Scott and others completed a second test on the William Myers farm in the Clinton sand at a depth of 3,200 feet. It produced 65 bbls. the first day after shot. In the southeast quarter of this township, Hope Construction & Refining Co. completed No. 6 on the Joseph Varner farm in the Clinton sand, total depth 3,202 feet, and it produced 60 bbls. the first day after shot. In NW Section 6, Hopewell Township, the Preston Oil Co. drilled a second test on the Marion Leasure farm through the Clinton sand to a depth of 3,250 feet. It was a dry hole.

In Ashland County, Maple Oil Co. and others completed No. 4 on the A. J. McClure farm, SW Section 10, Lake Township, in the Berea sand at 540 feet. It is showing for a 2-bbl. pumper.

In Knox County, Upham Gas Co. completed a second test on the Clem McNabb farm in Section 20, Butler Township, in the Clinton sand, and it is a 500,000-foot gas well. In the same section, Ohio Fuel Gas Co. drilled a test on the B. R. Carpenter farm through the Clinton sand which was dry.

In Medina County, Preston Oil Co. completed No. 18 on the J. F. Grigsby farm, Tract 15, Lot 11, Chatham Township, in the Berea grit at a depth of 506 feet. It produced 10 bbls. the first day after shot. On Tract 15, Lot 12, same township, E. R. Edson & Son Co. completed No. 63 on the Edwin G. Miller farm at 517 feet, the Berea grit, and it produced 8 bbls. the first day after shot.

In Monroe County, Sutton Brothers, of Sistersville, and others completed a test on the William Eckelberry farm in Section 9, Perry Township, in the Big Injun sand at a depth of 1,509 feet. It produced 1 bbl. a day after shot.

In Noble County, Joseph Sailing and others completed No. 3 on the Alice Feldner farm, N half Section 25, Jefferson Township, in the lime at 1,037 feet. This well is very small and may make a 1-bbl. pumper.

In Washington County, Lincoln Oil Co. completed a test on the Rachel Wilson farm on Jim's Run in Section 10, Grandview Township, in the First Cow Run sand at a depth of 687 feet. It produced 10 bbls. the first day after shot. On Wingett Run in Section 34, Ludlow Township, Otto Heldman and others completed a second test on the Viola Adams farm in the Injun sand at 1,480 feet. It is a small gas well.

In Columbiana County, James Galey is drilling a test on the Richards Lyons farm in Middletown Township, which will reach the Berea sand within a few days. In this county, in the W half NE Section 28, Madison Township, Robert Cushing and others have completed the rig and engine house for a deep test on the Nila McIntyre farm.

SOUTHWEST PENNSYLVANIA

There was only one completion in Southwest Pennsylvania during the week. In Amwell Township, Washington County, Manufacturers Light & Heat Co. completed a test on the C. and S. L. Hazlette farm at a total depth of 2,975 feet, the Fifth sand. It is showing for 4 bbls. a day.

In this township, Carnegie Natural Gas Co. is down 2,915 feet on the R. M. Carrons No. 2 farm. The top of the Fifth sand was at 2,903 feet with a showing of oil in the sand. Wise Oil & Gas Co. is cementing a cave at 1,070 feet on the Ensley Kelsey farm.

In North Franklin Township, Washington County, E. H. and J. B. Tague have started drilling on the Clarissa Ramsey farm. In South Franklin Township, Furman Nuss and others are drilling at 570 feet on the James Pipes farm. New Oil & Gas Co. will drill on the W. Dodd farm and Carnegie Natural Gas Co. is building a road to a location on the John Dodd farm.

In Chartiers Township, Washington County, Canonsburg Pottery Co. has started drilling on the Pittsburgh Coal Co. lease. It is drilling at 180 feet.

In Greene County, Carnegie Natural Gas Co. is down 2,395 feet in No. 1 on the J. H. Orndoff farm in Center Township. The top of the Big Injun sand was at 2,260 feet, with the Pittsburgh Coal at 1,061 feet. In Richhill Township, Wasmuth & Callahan are drilling out the cement at 1,200 feet in No. 3 on the Daniel Goodwin farm. In Center Township, Rutan Oil Co. is down 525 feet in No. 3 on the C. T. Harvey farm.

In Dunkard Township, Greene County, Ira Donley is shut down at 1,040 feet on his own farm and is running 8¼-inch casing.

Deep Tests

In South Beaver Township, Beaver County, John Galey and others reached 950 feet in the deep test on the William Graham farm on Brush Run which is scheduled for the Oriskany sand. At this depth drilling was retarded by gas. In the Hundred-Foot sand, the top of which was at 797 feet, about 250,000 feet of gas was cased off to a depth of 833 feet. In the Thirty-Foot sand, at 853 feet, more gas of almost an equal volume was struck just 20 feet below the bottom of the 8¼-inch casing.

In South Shenango Township, Crawford County, the deep test of Carnegie Natural Gas Co. on the Gertrude Scott farm was cased with 10-inch to 140 feet. Another sand was struck below this, flooding the hole with water, and it will be drilled through and the casing reset and to a possible depth of 250 feet.

No hole was made in the deep test of William Snee and others on the Summit Hotel property in South Union Township, Fayette County, on Chestnut Ridge. The hole is being recemented due to a cave in cement after drilling by the lost tools at a depth of 3,962 feet, although the hole was drilled by almost 100 feet.

WEST VIRGINIA

There were four producers completed in West Virginia during the week, one in gas territory in Cabell County. In Guyandotte district, 1¼ miles south of the Ohio River and 2,000 feet east of the Guyandotte River, Merritts Creek Gas Co. drilled the test on the L. L. Wilson farm in the Big Lime at 1,118 feet. It produced, naturally, 28 bbls. the first day. The oil is black.

In Ritchie County, 1 mile west of Fonzo Post Office and on the Hughes River in Murphy district, Burley W. Barker completed No. 6 on the William Barker farm in the Injun sand at 1,810 feet and it is making 4 bbls. a day. In this district, Everett Starcher and others completed a test on the Myra Hays farm in the Squaw sand at 2,090 feet. It is showing for 2 bbls. a day.

In Wirt County, C. S. Benedict and others completed No. 5 on the Thomas Lewis heirs farm in Clay district in the Cow Run sand, and it will make about a half-barrel pumper.

In Gilmer County, Hope Construction & Refining Co. drilled the test on the K. C. Simmons farm in Center district to 3,133 feet in the slate. It is showing for 15 bbls. a day and is not completed. In Sherman district, Calhoun County, this company

shot and cleaned out No. 2 on the E. B. Bennet farm and increased production from 1 to 8 bbls. a day.

Gas Wells

Apart from the Oriskany feature, the well of the week was a gasser in Logan County. In Logan district, Southeastern Gas Co. completed the test on the G. W. Mitchell farm at a total depth of 2,442 feet. It gauges 6,111,000 feet a day. The Big Lime was at 1,758-1,928 feet; the Big Injun sand at 1,928-82 feet with a heavy showing of gas which blew out in 24 hours; the Berea sand was at 2,436-42 feet, with gas at that depth.

In Calhoun County, Harper Oil & Gas Co. completed a test on the O. J. Conley farm in Washington district in the Salt sand at a depth of 1,542 feet. It gauges 200,000 feet a day, natural. In Center district, A. H. Jackson completed a test on the E. R. Fluharty farm in the Injun sand at a depth of 2,112 feet. It is a small gas well, gauging 37,300 feet a day, natural.

In Putnam County, Teays Valley Gas Co. completed a test on the C. H. Cottle farm in Scott district in the Big Injun sand at a total depth of 1,885 feet. The Big Lime was at 1,673-1,848 feet; the Keener sand at 1,848-68 feet; the Big Injun sand at 1,878-85 feet, with about 740,000 feet of gas a day showing at 1,878-85 feet.

In Ritchie County, Samuel Summers and others completed a test on the Minnie Jones farm in Murphy district in the Injun sand at a depth of 1,984 feet. It gauges 284,000 feet a day. In Clay district, Everett Starcher and others drilled a test on the Blair Maryin farm through the Injun sand to 1,872 feet. It was dry.

In Roane County, H. H. Staats and others completed the test on the R. R. Petty farm in Curtis district in the Second Cow Run sand at a depth of 1,132 feet. It gauges 220,000 feet a day, natural. In Smithfield district, Guy Boggess and others drilled a test on the Anderson Boggs farm through the Lime to a depth of 2,405 feet. It was a dry hole.

Drilling in West Virginia

In Boone County, O. B. Cunningham and others have part of the material on the ground on the Mary and Delma Dolan farm in Washington district. Pond Fork Oil & Gas Co. has started drilling No. 22 on the Cole and Crane lease. Owens Illinois Glass Co. has started building a road to a location for No. 14 on the Little Coal Land Co. and is down 2,235 feet on No. 13. In Scott district, this company is building a rig on the Maile Ballard and others farm.

In Cabell County, Pridemore Gas Co. is spudding on the Irwin Ross farm in McComas district. There are five other wells drilling in this district. In Guyandotte district there are two wells drilling.

In Clay County, Elk River Gas Co. has started drilling on the Ruben Neal farm in Pleasant district. In this district the same company is rigging up on the M. and J. Neal farm. In Henry district, Virginian Gasoline & Oil Co. is rigging up No. 4,562 on the Brown, Goshorn and Swann lease.

In Gilmer County, McCall Drilling Co. has started drilling a second test on the D. L. Moody farm in Glenville district. It is 3 miles north of Sand Fork on Ellis Creek.

In Kanawha County, United Fuel Gas Co. has material on the ground for No. 4,268 on the S. L. Casey and others lease in Big Sandy district. In Poca district, W. O. Ziebold and others are down 850 feet on the D. A. Griffith farm test. In Loudin district Winifrede Co. has reached 950 feet in the No. 19 on its own property.

In Marion County, Victor E. Tennant is drilling at 630 feet on the J. T. Talkington farm in Lincoln district. In Monongalia County, Carnegie Natural Gas Co. is down 1,986 feet on the C. H. Brand farm in Cass district.

In Pleasants County, John Adams and others have made a location on the L. N. Barr heirs farm in Union district. In Lafayette district, Smith and Hendershot are drilling on the J. J. Simonton farm.

In Ritchie County, Coyle Farm Oil & Gas Co. has made a location on the Peter Coyle farm in Murphy district. S. O. Wilson and others have made a location on the Aaron Tingler farm in the same district. In Grant district, Russel Morris and others are almost in the sand with a second test on the A. C. Scaddon farm.

Central West

Few Completions Reported, Busy on Drilling, Locations

By GEORGE A. WHITNEY

FINDLAY, Ohio, Sept. 2.—Completions in the Central West Field were the lightest for a long period, but new wells are drilling and numerous locations have been staked, as the operators are anxious to get as many as possible on production before extreme cold weather comes. There are numerous small gas wells showing, but no large producers.

In Hardin County, Jupiter Oil Co.'s No. 3 on the George Mathews farm, Section 18, Pleasants Township, had an initial production of a half barrel and 4,000 feet of gas at 1,361 feet. T. E. George & Co. is drilling No. 1 on the Bert L. Thompson farm, Section 15, Goshen Township.

In Putnam County, Brown & Co.'s No. 2 on the W. B. Geirhart farm, Section 23, Blanchard Township, produced 15 bbls. at 1,350 feet.

In Coshocton County, Griffith, Tustin & Harmer are drilling below 400 feet on the Avis Reed farm, Section 6, Tiverton Township. In Wyandot County, Veont & Co. is drilling No. 1 on the N. M. Kramer farm, Section 19, at below 1,350 feet.

In Cuyahoga County, Ohio Fuel Gas Co. is drilling below 2,405 feet in No. 1-5,999 on the Ralph W. Frank farm, Section 37, Strongsville Township. J. W. Cushing is drilling below 2,760 feet in No. 2 on the Aluminum Co. property, Lot 291, same county.

In Ashland County, Ohio Fuel Gas Co. is drilling below 2,410 feet in No. 1-5,998 on the Clarence Kline farm, Section 16, Orange Township. Same company is drilling No. 1-6,007 on the Priest & Kaufman farm, Section 8, Jackson Township; and is starting drilling No. 1-6,006 on the Harley E. Jones farm, Section 20, Mohican Township. Robison & Co. is drilling No. 1 on the Watson Atterholt farm, Section 31.

In Stark County, Ohio Fuel Gas Co. has a location for No. 3 on the Eli S. Finley farm, Section 31, and for No. 1 on the George H. Deuble farm, Section 2. East Ohio Gas Co. is shut down at 300 feet in No. 4 on the Howard Fawcett farm, Section 17. Same company is shut down on No. 2 on the D. & M. Braucher farm, Section 10, at 3,940 feet, and on No. 1 on the G. & E. Whetstone farm, Section 13. Same company has a rig for No. 1 on the J. & E. Holtzback farm, Section 4, Jackson Township. White & Lyons are fishing in the sand on the J. & L. Deetz farm, Section 21, same township. In Plain Township, H. & E. Fawcett is drilling below 2,100 feet in No. 1 on the H. & E. Fawcett farm, Section 21, same township. Obmiller & Co. is drilling below 2,050 feet in No. 1 on the C. & H. Rose farm, Section 5, Plain Township. East Ohio Gas Co. is moving on the M. D. Smith farm, Section 3. DeWalt & Louden is fishing for lost tools in No. 1 on the Charles C. Weirough farm around 375 feet. Lyons & Co. is rigging up for No. 1 on the Homer E. Snyder farm. White & Co. is drilling below 4,000 feet in No. 2 on the Jacob Isler farm, Section 25. Wiser Oil Co. has rig on the Ralph Shaffer & Co. farm, Section 5, Pike Township.

In Holmes County, Lydic Oil & Gas Co. has rig for No. 2 on the Gladys McDowell farm, Section 26, Monroe Township. Hulse & Tedlow are drilling below 3,125 feet in No. 1 on the Paul J. Blanchat farm, Section 12, Richland County.

In Tuscarawas County, James Upham's No. 1 on the Alfred G. Uhlers farm, Section 4, Fairfield Township, is a gas well at 4,818 feet. Federal Oil & Gas Co.'s No. 1 on the George A. & Cora S. Mathias farm, Section 1, Warrick Township, is dry at 4,972 feet. Capital Drilling Co. has some tools on the Stewart Asher farm, Lot 9, Washington Township. Frank Phillips & Co. is drilling below 975 feet on the R. A. Stocker farm, Lot 12, Oxford Township.

In Central Ohio, in Ashland County, Ohio Fuel Gas Co. is drilling No. 1 on the Harley Jones farm, Section 20, Mohican County; and Robison & Co. is drilling No. 1 on the Watson Atterholt farm, Section 31, same township. Ohio Fuel Gas Co. is drilling No. 1 on the Clarence Kline farm, Section 16, Orange Township.

In Summitt County, City Natural Gas Works has a rig for No. 3 on the F. A. Ruff farm, Section 1, Rush Creek Township, and is drilling No. 1 on the Mertz & Moyer farm, Section 31, Pleasants Township.

ILLINOIS

No completions were reported from Illinois, but eight wells are drilling. In Clarke County, Gifford & Morrow are drilling No. 2 on the W. B. Johnson farm, Section 36, Casey Township. In Parker Township, C. Hartman is drilling No. 1 on the J. T. Baughman farm, Section 20, Parker Township; and F. E. Stohr & Co. is drilling No. 1 James Turner farm, Section 33, same township. J. S. Phillips is drilling No. 27 on the J. S. Phillips farm, Section 18, same township.

In Crawford County, Frank Ellison is drilling No. 1 on the E. R. McLean farm, Section 2, Prairie Township. Price & Weger are drilling No. 1 on the H. Standfield farm, Section 36, same township. In Lamotte Township, Karns & Co. is drilling No. 1 on the Orland Walker farm, and Salvage Oil Co. is drilling No. 1 on the John Patton farm, same township.

INDIANA

Indications are some large development work will be done in the Indiana Field. In Sullivan County, W. A. Sage is drilling No. 1 on the Glesse Eads farm, Section 6, Cass Township. Vanderburg Oil Corp. is drilling No. 9 on the George Hornby farm, Section 32, Center Township.

In Dubois County, P. E. Tichenour is drilling No. 1 on the August Wilbetter, Section 34, Cass Township. In Harbison Township, F. L. Damron is drilling on the Andrew Sendelwick farm, Section 32.

In Martin County, George E. Nelson & Co. is drilling No. 2 on the Ethel V. Burriss farm, Section 25, Perry Township.

In Knox County, Pierson, Loyd & Thayer's No. 2 on the N. A. Hall farm, Section 15, Busseron Township, is drilling.

In Spencer County, Staves Drilling Co.'s No. 3 on the Raymond Bretz farm, Section 34, Ohio County, produced 15 bbls.

In Hupp Township, Spencer County, John Porter Wynn's No. 1 on the William Racine farm, Section 33, was dry. V. S. Hollingsworth is drilling No. 1 on the John Heinze farm in Anderson Township.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 gallons)

	June, 1935		May, 1935		Jan.-June,	Jan.-June,
	Total	Daily av.	Total	Daily av.	1935	1934
Production	3,008	100	3,085	100	18,610	17,509
Decrease in all stocks	126	4	....	....	....	..
Total	3,134	104	3,085	100	18,610	17,509
Blended at refineries	2,019	67	1,895	61	12,050	11,486
Run through pipe lines in California	71	2	43	1	303	716
Jobbers, exports, etc.	734	25	480	16	3,222	3,281
Increases in all stocks	...	...	391	13	1,635	886
Losses	310	10	276	9	1,400	2,140
Total	3,134	104	3,085	100	18,610	17,509

California Field Report

By
L. P. STOCKMAN

EL SEGUNDO DISAPPOINTING, BUT MAY OVERCOME TROUBLE

LOS ANGELES, Calif., Sept. 2.—The effect the present unsettled condition will exert on drilling in California during the remainder of the year is problematical, as much depends upon how long crude prices remain depressed and the ability of operators to revive curtailment. No interruption of drilling operations is anticipated in the Semi-Tropic gas field and Dominguez, Kettleman North Dome, Edison, Mount Poso, Round Mountain and Midway-Sunset.

Republic Petroleum Co., believed to have discovered an oil field in the El Segundo district, is still working on the discovery well and preparing to pump. It does not have sufficient kick for natural flow but should make a fairly good pumper. For several days it flowed for short periods following swabbing operations which seems to be all it needs. It is thought with pumping it will be a commercial producer. The failure to come in under a natural flow is disappointing as it showed plenty of kick a week ago. This may be due to mechanical trouble and may be overcome.

Completions during the week were numerous enough to justify expectation completions during 1935 will be far in excess of the past several years. Standard Oil Co. completed an excellent well in the North Belridge Field of Kern County when No. 2 McPhail was brought in flowing 3,180 bbls. of 38.9 gravity and 35,000,000 feet of gas per day from 8,501 feet after the hole had been completed with a 5-inch perforated liner. Belridge Oil Co., discoverer of Temblor and Eocene production in this field, is working on two new wells in Section 35-27-20, scheduled for completion within six weeks.

Playa Del Rey

That the Palisades section of the Playa Del Rey Field is definitely headed for a substantially lower level is evidenced by only three wells producing under a natural flow at present. If operators in the Palisades area produce to the maximum during depressed prices, unit holders and stockholders of some companies will find their investments show a severe contraction within 30 days. Del Rey Realty Co. completed No. 29 Herndon a few days ago, bottomed at 6,202 feet and finished with a 4½-inch liner, brought in under a natural flow making 838 bbls. of relatively clean 21.8 gravity and 2,500,000 feet of gas per day. In the older section Union Oil Co. completed No. 10 Del Rey pumping 398 bbls. of 21.2 gravity from the upper zone after the hole had been plugged back from 3,865 feet to 3,632 feet. On the Vidor lease Union should have No. 12 ready for a production test within a week.

Several new wells are being started in the Santa Fe Springs Field and most of them will begin making hole within 15 days. Union is starting two new wells on the Bell lease and two more on the Alexander lease while General Petroleum is rigging up No. 26 Santa Fe preparatory to an early spud. In the Seal Beach Field Continental Oil Co. has spudded in No. 37 Bixby but it will be 60 days before it reaches the pay. Standard Oil Co. put two wells on production in the Inglewood Field during the week and should have another tanking oil within next week. No. 76 on the Los Angeles Investment lease was recompleted flowing 1,854 bbls. of 30.3 gravity and 2,100,000 feet of gas per day from 3,380 feet. It was given a preliminary production test a few few weeks ago from 2,800-foot level but failed to hold up and was redrilled and deepened. No. 32 on Vickers lease No. 1 was completed at 3,712 feet and brought in pumping 260 bbls. of 26.2 gravity but showing a rather high cut and may require some remedial work.

Mountain View

The Mountain View Field of Kern County appears to have taken a new lease on life although the price cut may retard drilling during the next 30 days. The A. T. Jergins Trust recompleted No. 1 Wright-Bloemer flowing 3,185 bbls. of 32.8 gravity and 2,600,000 feet of gas per day after the hole had been redrilled and deepened to the Wharton zone and finished at 5,917 feet with 4¾-inch liner including 204 feet of perforated. The Barnsdall Oil Co. is reaming No. 4 Morris preparatory to landing and cementing the water string and is building rig for No. 5 Morris. Standard Oil Co. is preparing to spud three wells. Union Oil Co., which staked location for No. 2 on K.C.L. lease B, has not yet started rig construction.

Republic Petroleum Co. finished another flowing well out in the Kern Front section when No. 4 Strassburger blew in flowing 600 bbls. of 15.1 gravity per day from 2,110 feet. Nos. 3 and 4 on the Strassburger lease of Republic Petroleum are the first wells to show a natural flow since extension work was started in this part of the Field. Tentative plans call for drilling five additional wells on this lease at progressive intervals in addition to No. 5, just under way. Chanslor Canfield Midway Oil Co. has completed No. 46 in Section 23-28-27, pumping 428 bbls. of 14.9 gravity per day from 2,159 feet following completion with an 8⅝-inch liner carrying 355 feet of perforated. No. 4 in Section 25-28-27 of the Kern River Oilfields was brought in pumping 390 bbls. of 15.2 gravity per day following completion at 2,055 feet and with 8⅝-inch liner. Several wells are being started in this section and Associated Oil Co.'s Nos. 4 and 5 on the Premier fee property, No. 6 McDonald of Bishop Oil Co., No. 4 fee of Standard Oil Co. and No. 5 of Kern River Oilfields should get under way within a fortnight.

—Courtesy James C. Bransford, W. P. Story Bldg., Los Angeles.

Location of Amerada Petroleum Corp.'s well which is regarded as having opened new dry gas field 70 miles east of San Francisco

Mount Poso

Recent developments in the Mount Poso Field of Kern County indicate probability drilling will show a substantial increase as the price was not cut in this field. Union Oil Co. completed No. 27 S. & M. in Section 4-27-28, pumping 1,045 bbls. of 16.9 gravity per day. Section Two Oil Co. abandoned its outpost in Section 2-27-28 as a duster at 1,205 feet. Petroleum Securities is grading location on Modoc property in Section 34-27-28 and Archie Mayes is rigging up rotary preparatory to spudding in close proximity to No. 1 Modoc of Petroleum Securities. Texas Co. is expected to complete No. 7 Vedder in Section 4-27-28 within a few days as the 11¾-inch water string was recently landed and cemented at 1,574 feet.

Round Mountain

Honolulu Oil Corp. is making preparations to complete No. 93 in the Round Mountain Field of Kern County and this well, bottomed at 2,216 feet, should be tanking oil within 24 hours. Honolulu is rigging up No. 78 and has started rig construction for No. 62 in Section 18-28-29. Shell Oil Co., which has not undertaken any extensive drilling in this field, has staked location for No. 2 on the Olcese lease No. 1 in Section 17-28-29. On Jewett lease No. 3, Shell has staked location for No. 5 in the northeast corner of Section 19-28-29.

Kettleman Hills

Although crude prices were substantially reduced at Kettleman Hills it is not likely this will affect drilling operations in the North Dome as both Kenda and Standard are committed to progressive development. Standard is building rigs in both the eastern and western sections. These include No. 58-19-J, No. 23-29-J, No. 76-29-J, and No. 32-7-Q. Early this week the company spudded in No. 82-7-Q which is slightly below 1,000 feet. The Kettleman North Dome Association either has new rigs erected or in course of construction for No. 21-28-J, No. 85-34-J, No. 34-1-P and No. 6-20-J. Union Oil Co. has run into mechanical trouble on No. 1 Lillis-Welch and progress is being delayed pending recovery of the fish. Continental Oil Co. has landed a string of 5-inch in No. 1 Gatchell, a wildcat in

the South Dome, and work will be resumed within a week at 7,420 feet. In the Middle Dome, Standard Oil Co. is making a water shut-off test following recementing of the 9-inch water string landed and cemented at 7,595 feet.

Fruitvale

Western Gulf Oil Co., discoverer of the Fruitvale Field of Kern County, completed one well during the week and started rigging up rotary on No. 1 Wear in Section 21-29-27 and No. 1 Brackenbury in Section 27-29-27. The well was No. 2 Parker in Section 27-29-27, with an initial daily production of 451 bbls. of 18.9 gravity from 3,490 feet after the hole had been plugged back from 3,589 feet and finished with a 6⅝-inch liner carrying 86 feet of perforated. Western Gulf is drilling one other well, No. 1 Livezey in Section 21-29-27, which has just passed the 3,850-foot level. A check in the Edison Field of Kern County indicates probable completion of two new wells during the week and the starting of a like number. General Petroleum's No. 2 Nichols has been bottomed in oil sand at 1,904 feet and is standing cemented with a string of 11¾-inch landed at 1,755 feet.

Long Beach

Five new wells were completed in the Long Beach Field, although none registered substantial production. The most satisfactory was A. D. Mitchell's No. 7 Signal, brought in pumping 290 bbls. of 25.6 gravity per day from 4,637 feet. Fairway Oil Co.'s No. 1 Long Beach, bottomed at 4,566 feet and finished with a 7-inch water string landed and cemented at 4,150 feet, was brought in on the beam pumping 120 bbls. of 25.2 gravity cutting approximately 50 per cent. Consolidated Empire Petroleum Corp. completed No. 4 pumping 119 bbls. of 24.6 gravity per day after plugging back from 4,406 feet to 4,110 feet. Bernal Oil Co.'s No. 4 Signal was completed pumping 246 bbls. of 26.1 gravity cutting 20 per cent. It was bottomed at 5,833 feet and water is believed to have been located at the cementing point, 5,294 feet. Legion Oil Co.'s No. 1 Long Beach, bottomed at 4,680 feet, has been disappointing as it was good for only 58 bbls. of 26.5 gravity.

The State entered the controversy in the Huntington Beach Field by ordering the owners of 88 wells producing from beneath state tidelands to increase production in order that it might receive $100,000 per month royalty. State officials and the Central Committee of California Oil Producers tangled when the committee refused to sanction an allowable of 19,231 bbls. per day as the quota of the 88 wells for September. Subsequent reduction in crude prices and temporary retirement of the Central Committee has shelved the proposition but it may be brought up later. Carl Sturzenacker, chief of the division of lands, told Umpire Pemberton that "while we do not wish to jeopardize the oil industry, and wish to co-operate in every way, our financial condition is such we need all moneys obtainable and a good part of it should come from this source."

Umpire Pemberton came back with a definite refusal to permit any deviation from the adopted practice by writing state officials that "in your letters you have suggested that a certain group of wells within a given field should be allowed more production than another group of wells, and, were such request granted, it would mean the operators producing wells under a state royalty would obtain a financial advantage over other producers in the same field and would permit the state wells to drain the wells of operators producing from privately owned lands, and to permit such a situation would be to abandon all former efforts at maintaining a fair and equitable allocation between wells, and, while it might increase the revenues to the State, it would by an equal amount decrease the income of all other royalty owners and oil well operators within the state. While I cannot definitely state that the above were the exact reasons why the Central Committee refused to approve the suggestions contained in your letters, yet I feel that the matters herein discussed were in the minds of those members who voted against the proposal."

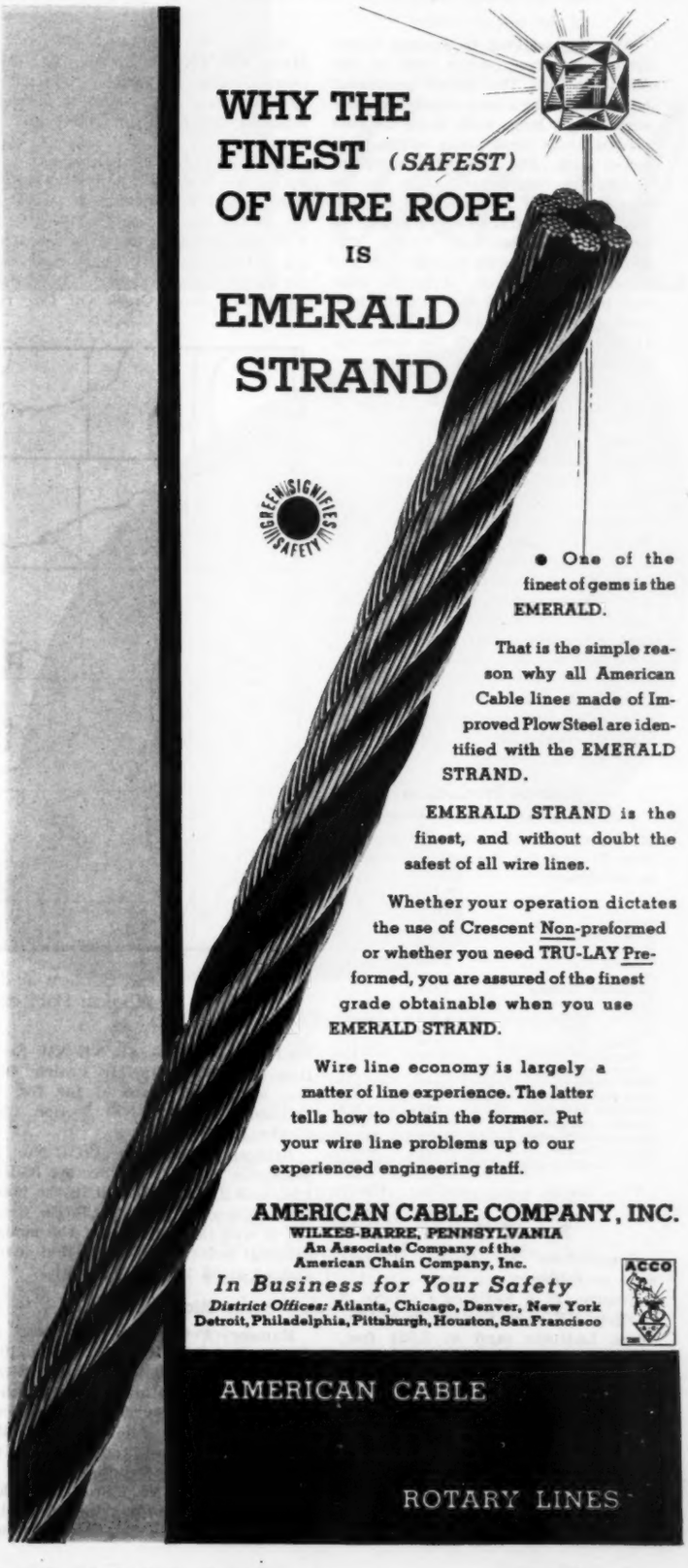
The California Senate Investigating Committee, appointed at the last session of the legislature, held its first hearing at Huntington Beach early this week and ordered an exhaustive survey of all oil wells in the Huntington Beach area adjacent to the ocean front to determine the extent of whipstocking or tapping of state tidelands. The survey is being made in preparation for further hearings to be conducted within the next two weeks. Of approximately 200 wells, within 1,000 feet from the ocean front, 80 have already been surveyed and have been eliminted from this controversial matter. It is believed with additional eliminations only about 100 wells will be found to have progressed to such an extent they intercept the state tidelands. Any wells found to be bottomed beneath the tidelands will receive special consideration with a view of forcing the owners to pay both current and back royalties to the State.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	August 18		August 11			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	.....	.. ..	.....	.....	.....	9,592,642
Diesel and gas oil	.....	.....	.....	.....	527,098	1,000,056
Gasoline	.....	.....	190,655	27,236	4,967,758	4,965,575
Kerosene	.....	.....	.. ..	.....	753,457	648,080
Asphalt	.....	.....	.....	.....	.....	70,019
Other finished oil	.. ...	.....	.....	.....	.....	54,778
Foreign exports—						
Crude oil	699,876	99,982	183,941	26,277	8,660,333	5,029,781
Fuel oil	214,404	30,629	239,593	34,228	7,765,015	8,251,429
Diesel and gas oil	108,820	15,546	104,225	14,889	2,854,061	2,813,445
Gasoline	112,317	16,045	150,099	21,443	4,121,921	2,718,671
Kerosene	.....	.....	37,475	5,354	850,953	1,274,206
Other finished oil	.....	.....	.....	.....	.....	3,529
Other unfinished oil	.....	.. ...	.....	.....	99,847	186,069
Coastwise-domestic—						
Crude oil	95,724	13,675	.....	.....	3,507,277	5,628,205
Fuel oil	196,658	28,094	221,131	31,590	6,094,233	5,836,533
Diesel and gas oil	16,638	2,377	.....	.....	614,167	492,191
Gasoline	534,529	76,361	410,817	58,690	7,294,900	7,987,272
Kerosene	7,402	1,057	.....	.....	129,382	105,188

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	.....	110,650
Diesel and gas oil	894	128	.....	.....	158,152	448,113
Gasoline	.....	.....	.....	.....	.....	218,985
Kerosene	.....	.....	.....	.....	149,715	276,412
Asphalt	.....	.....	72,350	10,336	420,414	.....
Lubricants	6,835	976	.....	.....	42,007	26,500
Foreign exports—						
Crude oil	.....	.....	67,498	9,643	1,533,149	1,176,005
Fuel oil	123,490	17,641	33,410	4,773	1,410,700	1,249,871
Diesel and gas oil	.....	.....	72,903	10,415	804,512	942,761
Gasoline	.....	.....	30,149	4,307	1,941,338	2,129,146
Kerosene	.....	.....	23,476	3,354	507,188	668,296
Lubricants	16,101	2,300	.....	.....	152,500	108,580
Other finished oil	.....	.....	.....	.....	.....	2,760
Other unfinished oil	.....	.....	.....	.....	.....	5,750
Coastwise-domestic—						
Fuel oil	282,121	40,303	163,737	23,391	4,386,412	3,602,528
Diesel and gas oil	.....	.....	18,436	2,634	160,103	105,912
Gasoline	32,928	4,704	104,278	14,897	2,889,756	3,129,905
Kerosene	.....	.....	.....	.....	64,034	64,805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Kansas Developments

By JAMES McINTYRE

NEW WELL IN OXFORD POOL STARTING OFF AT 6,874 BBLS.

The Oxford Pool in Sumner County has another gusher well in the Arbuckle lime, the deeper producing horizon that has been supplying some surprisingly large wells in an old pool opened about eight years ago in Stalnaker sand. The Amerada Petroleum Corp. and Sunray Oil Co.'s No. 10 Gassaway, SW NW SE SW Section 14-32-2e, made 6,874 bbls. of oil in its 24-hour potential test Friday and Saturday. This well was an old producer at 1,646 feet. Arbuckle lime was topped at 2,832 feet and the hole drilled to a total depth of 2,901 feet. It offsets to the north the same operators' 6,000-bbl. well recently completed in the deep sand.

Barber County appears to have a new pool on the west side. L. H. Wentz' No. 1 Skinner, SE NW NW Section 29-31-14w, had Chat at 4,538-45 feet with 400 feet of oil in the hole. Six-inch casing was being underreamed. It lies west of the little Whelan Pool, as indicated on the accompanying map.

In the field generally the week was a quiet one in the way of completed wells and new work compared with other weeks this summer, but it was only a lull in the course of development work. The near completions in the State were considerable in number and should figure in next week's completion list. The report by counties follows:

Kansas Production

Estimated daily average production of Kansas for the week ending August 31 and for the preceding week is as follows:

	Barrels	
	Aug. 31	Aug. 24
Burrton	15,200	15,625
Ritz-Canton	7,650	7,850
Hollow	2,475	2,425
Voshell	3,900	4,175
Nikkel	3,150	3,200
Sedgwick County	7,875	7,600
Ellsworth County	10,125	8,690
Barton County	2,315	2,162
Rice County:		
Chase Pool	12,800	13,125
Raymond Pool	2,100	2,750
Remainder	5,240	6,379
Ellis County	486	574
Kingman County	584	708
Stafford County	2,412	1,824
Russell County	12,175	13,150
Greenwood County	10,900	10,750
Butler County	18,750	18,800
Other pools	20,513	21,183
Total Kansas	139,750	141,375

Russell County

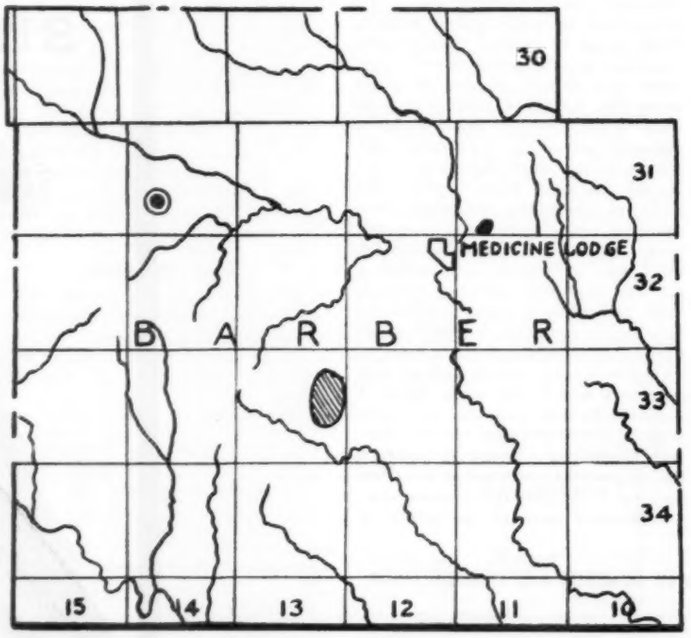
Completions in Russell County were as follows:

Empire Oil & Refining Co.'s No. 3 Ehrlich, SE cor. Section 28-13-14w, found LaMotte sand at 3,324 feet, total depth of the hole 3,520 feet. No commercial production was found in the test and it will be used as a water disposal well.

Billings and others' No. 5 Witt, NW NE SE Section 4-14-15w, Oswald lime at 3,024 feet, with pay at 3,048-55 feet, total depth 3,090 feet, acidized, pumped a potential production of 1,390 bbls. per day.

Bridgeport Machine Co.'s No. 2 Mills, SW SE NE Section 4-14-15w, Oswald lime at 3,038 feet, pay at 3,077-81 feet, total depth 3,111 feet, acidized, pumped 106 bbls. in 24 hours.

Aylward and Skelly Oil Co. have rig up for No. 3 Killian, SW SE NE Section 28-13-14w; Bridgeport Machine Co., cellar dug for No. 2 Polcyn, NE NW NE Section 10-14-15w; Crown Oil Co. and Saco Oil Co., cellar dug for No. 2 Mills, NE NE NW Section 10-14-15w; Wolf Creek Oil Co., rig up for No. 1 Mills, SE NE NW Section 10-14-15w; Sinclair Prairie Oil Co., moving in material for No. 2 Sellens, NW NW NE Section 35-15-13w.



L. H. Wentz' test in Section 29-31-14w, which may open a new pool west of Whelan Pool and Medicine Lodge gas pool

Bridgeport Machine Co.'s No. 1 Michaelis, NE NE SE Section 33-15-13w, had 2,350 feet of oil in the hole from Siliceous lime at 3,347-50 feet, but it was the only one of the many drilling wells in Russell that had arrived at an interesting depth.

Rice County

Ramsey Petroleum Co.'s No. 1 Gouldner, NW SW NE Section 16-18-9w, in the Gouldner Pool, Rice County, was a failure. It had Siliceous lime at 3,266 feet, salt-water at 3,271 feet and a hole full of salt water at 3,285 feet, total depth. It was abandoned.

Gypsy Oil Co.'s No. 1 Stoltz, SE SE NW Section 32-19-10w, Steckel Pool, produced 1,134 bbls. in 24 hours from Siliceous lime at 3,307-25 feet and was placed on the completion list.

Empire Oil & Refining Co.'s No. 4 Meyers, NW SE SW Section 21-19-9w, in the Beyer Pool, will be used as a water disposal well having found no pay down to 3,616 feet. Siliceous lime was topped at 3,215 feet. Shell Petroleum Co.'s No. 5 Tournear, NW SW SE Section 29-19-9w, in the Chase Pool, was dry and abandoned at 3,340 feet. It had Siliceous lime at 3,228-35 feet, with some oil. It was shot and later acidized, but failed to make a paying producer. Same company's No. 6 Tournear, SE NW SE Section 29, was likewise a failure. It was drilled to 3,290 feet and plugged back to 3,107 feet and acidized with little oil results.

Gypsy Oil Co. had cellar dug for No. 1 Wendell, NW NW SE Section 32-19-10w.

Skelly Oil Co.'s No. 1 Volkland, SE SE NW Section 27-18-10w, was at a total depth of 3,167 feet. It filled 1,000 feet with oil in four hours and later swabbed 85 bbls. in eight hours.

C. B. Davis and others' No. 3 Dueser, 1,172 feet from south and 330 feet from east lines of SW ¼ Section 31-19-10w, had Siliceous lime at 3,278-97 feet. It pumped 119 bbls. in 24 hours and was then acidized. C B. Davis and others' No. 4 Dueser, SW cor. Section 31-19-10w, pumped 706 bbls. in 21 hours from Siliceous lime at 3,268-70 feet and was then given an acid treatment.

National Refining Co.'s No. 6 Sherman, SW NE SW Section 16-19-9w, had Siliceous lime at 3,215-33 feet, and after an acid treatment pumped a daily average of 270 bbls. for three days but was not completed.

Sinclair Prairie Oil Co.'s No. 7 Volkland, NE SW SE Section 20-19-9w, was acidized in Siliceous lime at 3,215-52 feet and swabbed 120 bbls. in 14 hours.

Elwell and others' No. 1 Lisk, NE NE SW Section 32-19-9w, found Siliceous lime at 3,257-60 feet and the hole filled 1,500 feet with oil in 24 hours. It had not been tested.

Ellis County

Tom Palmer and Storm King Oil Co. definitely completed their discovery well in southern Ellis County, No. 1 Ruder, SE NE NW Section 17-15s-18w, after deepening it to 3,440 feet and acidizing. It made a potential production of 818 bbls. in 24 hours at the new depth.

Tom Palmer and Storm King Oil Co. were drilling at 490 feet in No. 1 Bowlby, NE NW NW Section 13-11-16w, a wildcat, and had 15-inch pipe set at 450 feet.

Logan County

Alma Petroleum Co. and McNeely have rotary rig up for No. 1 Watchorn, C SW NE Section 13-15-33w, in Logan County, which lies north of Scott County, and about 30 miles north of the Shallow Water oil pool, but about 75 miles west and south of the nearest production in Trego County.

Sedgwick County

Shell Petroleum Corp.'s No. 6 Fisher, NE SE SE Section 15-26-2, Sedgwick County, deepened from 3,209 feet to Wilcox sand at 3,320-40 feet, swabbed 320 bbls. in 24 hours, but was not yet completed.

McPherson County

Tom Palmer and Sinclair Prairie Oil Co.'s No. 2 Clark, NE NE SE Section 31-18-2w, McPherson County, is a 65-bbl. initial producer completed in Kansas City lime at 2,318-40 feet, which was acidized.

Dickey Oil Co. abandoned No. 1 Feldt, SE SW NW Section 13-19-3w. It was acidized in Kansas City lime at 2,359-72 feet but produced only water, total depth 2,372 feet.

Mead Production Co. and others' No. 1-A Benson, NW NW SW Section 32-18-2w, pumped 361 bbls. in 24 hours after an acid treatment in Kansas City lime at 2,332-43 feet.

Ellsworth County

In the Lorraine Pool in Ellsworth County, Empire Oil & Refining Co.'s No. 1 Schmidt, SE cor. Section 11-17-9w, was completed in Siliceous lime at 3,216-17 feet, total depth. It

produced 500 bbls. of oil and 540 bbls. of water in 24 hours.

Bradley & Scanlon and others' No. 4 Mohney, NE SW SE Section 14-17-9w, found Siliceous lime at 3,185-86 feet and produced a potential of 657 bbls. in 20 hours and was completed.

Texas Co. completed No. 1 Dees, NE NE NW Section 23-17-9w, in Siliceous lime at 3,169-75 feet, total depth. Its initial production was 1,907 bbls. of oil.

No new work was started in Ellsworth in the course of the week.

Rosenthal, Beardmore & Hinkle's No. 1 Becker, NW NW SW Section 25-17-10w, had 2,700 feet of oil in the hole from Siliceous lime at 3,269-71 feet, but it had not been tested.

Empire Oil & Refining Co.'s No. 9 Rolfs, SW SW NE Section 14-17-9w, had Siliceous lime at 3,184-87 feet, and the hole filled 1,000 feet with oil in 90 minutes and filled completely later. It was acidized, but not given a production test.

Reno County

Gypsy Oil Co.'s No. 1 Krehbiel, C NW NE Section 35-23-4w, Burrton Pool, Reno County, old total depth 3,326 feet, was deepend to 3,355 feet and developed a 146-bbl. initial production after an acid treatment. It was completed. The well had been a gasser, starting off at 16,669,000 feet.

Shell Petroleum Corp.'s No. 1 Flory, C SE SE Section 9-24-4w, produced 1,395 bbls. of oil and salt water after an acid treatment in Chat at 3,305-90 feet. It was completed.

Olson Oil Co. and Shell Petroleum Corp.'s No. 8 Goering B, C N half N half Section 35-23-4w, in the Burrton Pool, was a hole full of water from Siliceous lime at 3,790-3,804 feet and was plugged back to 3,570 feet but not yet tested.

Gypsy Oil Co.'s No. 3 Myers, NE SE NW Section 3-24-4w, pumped 409 bbls. of oil in nine hours from Hunton lime at 3,596-99 feet.

W. C. McBride, Inc., and others' No. 2 Grandon, SW NE NE Section 3-24-4w, pumped 43 bbls. of oil in 12 hours from Chat at 3,260 feet, total depth 3,361 feet.

Harvey County

Selby Oil & Gas Co.'s No. 1 Sperling, SE cor. Section 14-22-2w, in the Sperling Pool, Harvey County, had Hunton lime at 3,261-3,320 feet which was acidized. The well was completed after it made its 71-bbl. initial production.

Butler County

Sinclair Prairie Oil Co.'s No. 29 Scully, a twin, C E half SE NE Section 9-27-4, Augusta district, Butler County, was completed in Siliceous lime at 2,447-53 feet. It was acidized and produced 85 bbls. initially.

Marathon Oil Co.'s No. 25 Blood, 660 feet south and 1,160 feet west of C Section 21-28-4, Augusta district, was a hole full of water from Siliceous lime at 2,517-25 feet and was abandoned.

Sumner County

In Sumner County, where the Oxford Pool has been showing some large producers in the deeper pay, Amerada Petroleum Corp. and Sunday Oil Co. set 12-inch pipe at 75 feet in No. 13-A Gassoway, 213 feet from south and 610 feet from east lines of SW ¼ Section 14-32-2. Shell Petroleum Corp. was drilling at 2,471 feet in No. 1 Buffington, SE SW NE Section 14-32-2e. Stanley & Jarvis and others are rigged up to start No. 1 Scroggin, 1,310 feet north and 1,000 feet east of C Section 14-32-2e, old total depth 2,090 feet and to be deepened to the Arbuckle pay horizon. Alma Petroleum Co. has rotary rig up for No. 2 Cadwell, SW SE NE Section 7-35-3.

Cowley County

Sanford & Connell's No. 1-B, 755 feet south and 660 feet west of NE cor. Section 31-31-6, Cowley County, made a four-day production averaging 80 bbls. per day from sand at 2,897-2,955 feet. It had swabbed 170 bbls. of oil in 24 hours after it was shot at 2,929-55 feet, the pay portion of the sand. The well was completed.

Baden, Johnston, Roth & Faurot had cellar dug for No. 2 David, NW NW SE Section 35-30-4.

Clark County

The Watchorn Oil & Gas Co. will not deepen its No. 1 Stevens, NW NE NW Section 21-32-21w, in Clark County, southwestern Kansas, as recently announced and the hole has been abandoned, total depth 4,290 feet. It was an old well? However, it is deepening No. 3 Stevens, 500 feet east and 660 feet south of NW cor. Section 21-32-21w, old total depth 5,471 feet. It set whipstock at 4,931 feet and was fishing at 5,165 feet.

Harper County

Kessler & Their and others' No. 1 Wolfje, SW SW NE Section 17-33-6w, Harper County, was abandoned at 5,078 feet. It had Kansas City lime, Chat, Wilcox sand and Siliceous lime, the last named at 5,011 feet, but found only salt water in any of them. There was a showing of oil in Kansas City lime at 4,000-10 feet and 4,050-55 feet.

Scott County

Atlantic Oil Producing Co.'s No. 1 Dague, SW NW Section 14-20-33w, in the Shallow Water Pool in Scott County, was acidized at a total depth of 4,646 feet and pumped 236 bbls. of 24-gravity oil in four hours.

Greenwood County

Ward McGinnis completed No. 1 Schultz, SE SE SW Section 31-23-12, Greenwood County, a 20-bbl. well at 1,847-75 feet, Mississippi lime.

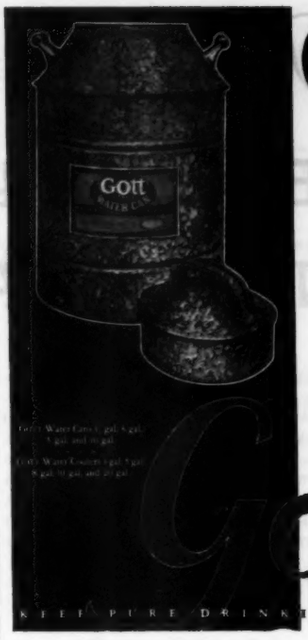
Harwood Oil Co.'s No. 2 Ladd, SE SE SW Section 26-25-8, in the Sallyards Pool, was dry and abandoned at 2,474 feet. It had sand at 2,455-71 feet.

Henderson & Holden completed No. 5 Hass, C SE NW Section 34-22-11, in sand at 1,877-1,925 feet. It was shot with 170 quarts and responded with a 75-bbl. initial production.

Sheedy and others were moving in material for No. 5 Akins, SW NE SE Section 19-25-14. Mohawk Oil Co. set 12-inch pipe at 555 feet in No. 1 Overstreet, NW NW NW Section 19-26-8, a wildcat.

Co-operative Investment

TORONTO, Ontario, Aug. 31.—The fourth co-operative investment trust of Imperial Oil, Ltd., opened in 1932 and recently completed, resulted in the distribution of 208,528 shares of Imperial stock to 3,557 employes. The market value of the stock exceeded $4,000,000, employes contributing approximately $1,600,000, the company nearly $800,000 and the difference representing appreciation in market value of the stock since the trust was launched.



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Michigan Field Report

By
PAUL A. ELLIOTT

SECOND 4,000 BARREL WELL IN CRYSTAL TOWNSHIP POOL

CRYSTAL, Mich., Sept. 2.—New Crystal Township Pool oil discoveries vied with large natural gas completions in the Millbrook Township, Mecosta County, Field last week as Michigan producers rushed onward, setting new records. Spurred by the previous week's completion of an estimated 4,000-bbl. producer in McClanahan Oil Co.'s No. 1-A Harry and Geneva Flint, NE NW NW Section 11-10n-5w, Crystal Township, one with about as large an estimated initial was brought in when J. W. Leonard, Jr., trustee's No. 3 G. R. West estate, NW NE NW Section 11, Crystal Township, flowed 225 bbls. during the first 30 minutes after being drilled into the Dundee but was pinched in to 75 bbls. an hour. It had been cased at 3,175 feet on a location between two 3,000-bbl. wells. McClanahan's No. 1-A Flint was completed the week before at 3,198 feet.

Rowmor Corp.'s No. 1, NW NW NW Section 2, Crystal Township, was transformed into a commercial producer by acid treatment after which it flowed 450 bbls. a day from a total depth of 3,203 feet in the Dundee formation. Daily Crude Oil Co.'s No. 3-A John Tow, NE SE SE Section 3, Crystal Township, struck a flow of oil in the upper Traverse at 2,782 feet after topping the Traverse limestone at 2,710 feet. Drilling was being continued to the Dundee, although the flow was the first of its size encountered in the upper formation in the Crystal area.

Crystal Extension Tests

An important key test in the northwest extension area ahead of the Crystal Pool is Marshall Bauman and others' No. 1 Ries, SE NW NE Section 34-11n-5w, Ferris Township, Montcalm County, in which casing has been recemented in at attempt to shut off water encountered at 3,221 feet. Dundee was topped at 3,210 feet and a show of oil and gas struck at 3,218 feet.

Michigan Gas & Oil Corp. will abandon No. 1 Clarence Dean, SE SW SW Section 30-11n-3w, Arcada Township, Gratiot County, drilled into water at 3,222 feet after a show of oil at 3,219 feet. Mid-State Development Co.'s No. 1 Richard W. Anderson, SE NE NE Section 20, same township, was shut down on top of the Dundee at 3,212 feet awaiting completion.

Newark Gas & Oil Syndicate's No. 1 George Beck, NE SE NE Section 29-10n-3w, Newark Township, Gratiot County, was drilling below 3,730 feet testing the Monroe after failure in the Dundee several miles east of the Crystal Field.

Charles Van Keuren, trustee's No. 1 Maud Evans, NE NE NE Section 22, Crystal Township, also is being deepened as a Monroe test after striking gas oil and water in the Dundee.

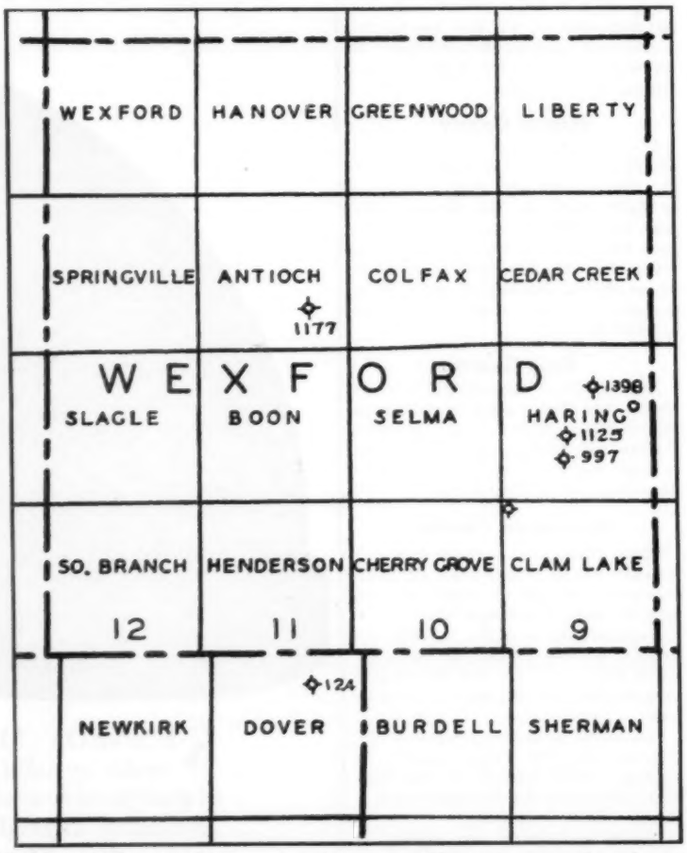
After several weeks of effort to make it a producer, W. J. Berner's No. 1 Strait in Section 35, Ferris Township, will be plugged. It had a good show of oil at 3,210 feet, but was drilled into bottom water which operators have been unable to shut off by backplugging.

J. W. Leonard, Jr.s No. 2 West, SE SE SW Section 2, is being abandoned after weeks of pumping mostly water on a location offsetting Eastern Gulf Oil Co.'s No. 1 George Barger, second test in the field also abandoned recently because of water encroachment.

Six other tests were nearing completion in the Crystal area, including Rex Oil & Gas Co.'s No. 1 Otto and Goldie Durbin, SE SW SE Section 2, Crystal Township; Town Line Oil Co. (Strange & Fortney) No. 1 Z. D. and Florence Rule, NE NE NW Section 2, Crystal Township; Crude Oil Co.'s No. 1 W. Robbins, SE NE NE Section 3, and No. 3 W. Robbins, NW NE NE Section 3; Daily Crude Oil Co.'s No. 1 John Flint, SE SW SE Section 35-11n-5w, Ferris Township, and T. F. Caldwell, Inc.'s No. 2 Jesse Flint, SW SE SW Section 35, Ferris Township. All were drilling at more than 3,100 feet.

Millbrook Gassers

A new Michigan record was set when four new gas wells in the Millbrook Township, Mecosta County, Pool, near the Montcalm County line, added nearly 35,000,000 feet daily to the open flow capacity of the newly developing central Michigan gas field.



Wexford County, Michigan, where a wildcat is reported to have pumped 120 bbls. of fluid, including 30 bbls. of water

The largest of the four wells completed within a two-hour period was Roy F. Ide, trustee's No. 1 Thomas Bright, C SE SW Section 33-13n-7w, Millbrook Township, Mecosta County, which had an open flow of 11,500,000 feet daily, or the largest in the field to date. Michigan Stray sands were topped at 1,246 feet and the hole completed at 1,260 feet between the big Williams well, which caught fire when brought in several months ago with an open flow of about 10,000,000 feet, and Gordon-Stewart's No. 1 Roberts, recently completed for 11,000,000 feet.

First to complete, and second largest of the four, was Wiser Oil Co.'s No. 1 T. Bright, C NE NW Section 4-12n-7w, Belvidere Township, Montcalm County, which made 9,600,000 feet daily from the Michigan Stray sand at a total depth of 1,260 feet.

Bundy Hill Oil & Gas Corp.'s No. 1 H. Schuberg, C SW NW Section 32, Millbrook Township, drilled 10 feet into the Michigan sands to a total of 1,290 feet, had an open flow gauged at 5,350,000 feet. D. F. Jones' No. 1 Harry Bissel, C NW SW Section 32, Millbrook Township, flowed at the rate of 7,900,000 feet daily from the Michigan Stray sands topped at 1,285 feet and drilled to 1,298 feet.

An attempted northwest extension of the Millbrook Pool was unsuccessful last week when Hal-Be-Oyle & Gas Co.'s No. 1 Henry Wallace, SE NW SE Section 1-13n-8w, Hinton Township, failed to strike any Michigan Stray sands, drilling through the Marshall from 1,378 feet, the top, to 1,639 feet, where it was abandoned.

The four new gassers are in a field where the Consumers Power Co. is hastening to complete a pipe line extension to transport the output to Midland, Bay City and Saginaw consumers.

New indications of a prolific natural gas reserve in the Crystal-Ferris Townships area in Montcalm County also were uncovered last week. In the course of oil drilling, daily flows ranging from 3,000,000 to 9,000,000 feet were discovered in the Michigan Stray sands. The Rowmor Corp.'s No. 2 Husted, NW NE NW Section 2, struck 3,000,000 feet, while Pure Oil Co.'s No. 1 Preston, NE SE NE Section 3, reported a 9,000,000-foot flow above the Marshall. Both are in Crystal Township.

Shell Petroleum Corp.'s No. 1 Smead, SE NE SE Section Section 2, and Eastern Gulf Oil Co.'s No. 2 Rule, NE NE SW Section 2, also hit flows of about 9,000,000 feet each. Prior to these shows, all in the same section, Daily Crude Oil Co.'s No. 1 Robbins, SE NE SE Section 3, also had struck a heavy flow of gas in the Michigan sands before going to oil in the Dundee.

Midland County

The only completion in the Porter Township, Midland County, Pool was Fred Turner and others' No. 2 Harry J. Bond, SW SE SE Section 7-13n-1w, good for about 80 bbls. a day after treatment in the Dundee topped at 3,408 feet and drilled to 3,442 feet, with the top of the pay at 3,434 feet.

Pure Oil Co. was expected to complete No. 1 Rayner, NE NE Section 11-13n-2w, Jasper Township, Midland County, this week.

About 80 bbls. of oil was produced

the first 24 hours in Richard Hall's No. 3 Harris-Bond, Section 7, Porter Township.

Other Montcalm-Mecosta Tests

Gordon Oil Co.'s No. 1 Paulson, NW SW NW Section 24-12n-9w, Winfield Township, Montcalm County, in which Cato Oil Co. also was interested, has been abandoned as a duster in the Dundee and Monroe formations after being drilled to a total depth of 3,888 feet.

Michigan Exploration Co. failed to strike gas in the Michigan Stray sands in No. 1 Hanson, a semiwildcat in Section 6, Home Township, but probably will deepen for oil.

Jasmid Oil Corp. developed a flow of about 500,000 feet daily in its No. 2 Coopersville State Bank test, C SE SE Section 22-13n-10w, Aetna Township, Mecosta County. Marshall was topped at 1,248 feet and the well drilled to about 1,253 feet, it was reported. The first test on this lease also had a show of gas, but has not yet developed commercial production.

Ogemaw County

Another Dundee producer was completed in Ogemaw County last week when Fred D. Clark and Cleston C. Johnson opened No. 1 State of Michigan, NE NE SE Section 6-21n-3e, Mills Township, for an initial output of 100 bbls. during the first 12 hours. Weber Oil Co.'s No. 1 Walter Wilcox, NW NE NW Section 34-22n-2e, West Branch Township, Ogemaw County, was being placed on production after acid treatment. Same company's No. 1 Stella Wilcox Traverse producer in Section 34, West Branch, will be deepened to the Dundee.

Wexford County

M. J. Ingold was reported to have pumped 120 bbls. of fluid, including 30 bbls. of water, from his No. 1 E. Webb, a wildcat, C SW Section 13-22n-9w, Haring Township, Wexford County, near Cadillac, in a 38-hour test for oil struck about two weeks ago in the upper Traverse at about 3,180 feet. Operators will continue testing in the hope of developing commercial production despite the water.

Sun Oil Co. has abandoned No. 1 John Peterson, C SW SE Section 19-17n-1w, Tobacco Township, Gladwin County, after striking bottom water at 4,141 feet in the Dundee topped at 3,816 feet. The same company also is abandoning No. 1 Mary Hines, Section 31, same township, after failure to show commercial production from a 1 to 4-bbl. show of oil in the Dundee. The hole was 3,998 feet. Two other tests are still drilling in Beaverton and Grout Townships, Gladwin County.

D. A. Burris set casing at 2,868 feet and was ready to drill into the Dundee in his No. 1 John Becker test, C NW SE Section 35-8n-3w, Essex Township, Clinton County, near St. Johns.

Alberta Crude Production

Alberta crude production for July totaled 102,115 bbls. of water-free oil, compared with 105,183 bbls. in June. Turner Valley naphtha declined from 100,331 to 96,248 bbls., and Turner Valley light crude from 1,553 to 1,399 bbls. Red Coulee light crude was down from 1,716 to 1,660 bbls. Wainwright heavy crude increased from 1,583 to 2,008 bbls., and the Skiff Field, which produced nothing in June, yielded 800 bbls. in July.

Canadian Fields

Reported Discovery of Oil in Section in Northern Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Aug. 31.—Reports have reached Col. Malcolm Lang, chairman of the Timiskaming & Northern Ontario Railway Commission at North Bay, of an oil discovery about 30 miles west of Moosonee, the railway terminal on James Bay. Railway officials will probably investigate the discovery. The James Bay delta has for many years been regarded as a potential oil prospect, and for some years geological work was undertaken in certain areas at the instance of the Ontario government, which disclosed potential oil structures. One or two isolated tests were drilled but failed to secure commercial production. The lack of surface indications, owing to the heavy covering of muskeg, makes geological work difficult and uncertain, and only a small portion of the potential area has been investigated.

Pekisko Oil Show

On the Pekisko structure, south of Turner Valley, Pekisko Hills Co.'s No. 1, LSD 6, Section 6-17-2w5, is below 3,210 feet after getting a fair show of 50 gravity crude in the Madison limestone at 3,145 feet. It got the Madison at 1,071 feet, re-entered the Fernie shale around 1,235 feet, and again got the Madison at 1,308 feet, with gas shows at 1,480 feet, 2,025 feet, 2,850 feet and 3,080 feet. Samples are being analyzed to determine whether the drill has passed from the Madison lime into the underlying Devonian.

In the Forest Reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is below 5,090 feet with a small show of oil.

On the Moose Dome west of Calgary, Moose Oils' No. 1, LSD 8, Section 29-22-6w5, is below 202 feet with 18½-inch casing and planning to make water shutoff around 300 feet. Moose Oils' No. 1, same section, which is supplying gas for drilling fuel, is maintaining around 480 pounds pressure between 8-inch and 10-inch casing.

On the Highwood-Sinclair structure south of Turner Valley, Maple Leaf Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is at 2,180 feet with samples showing traces of crude. More gas has been struck, followed by caving, and the hole is being cemented.

On the Watson structure north and west of Lundbreck, Mar Jon Oil Co.'s No. 3, LSD 3, Section 4-10-2w5, is drilling in green sand below 3,000 feet with 13-inch casing at 2,900 feet. It got a sweet gas flow, about 1,000,000 feet a day, at 2,814 feet, and is apparently in the top of the Blairmore formation. The gas will be harnessed for drilling fuel and the test deepened for oil. On the same structure, Raven Oils' No. 1, LSD 1, Section 20-9-2w5, is resuming after cementing casing at 1,225 feet. Contract for completion has been let to Alf Patrick of Calgary. Mar Jon-Maxmont's No. 4, LSD 10, same section, is fishing.

In the old Oil City Field, Waterton Lakes Park, Oil City Royalties' No. 1, Section 30-1-30w4, is below 2,154 feet.

On the Aldersyde structure east of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w, is below 6,475 feet with no change in formation.

Turner Valley Field

In the North Turner Valley Field, Model Oils' No. 3, LSD 1, Section 22-20-3w5, offsetting Royalite Oil Co.'s No. 26 producer, is below 3,820 feet after getting a show of wet gas at 3,780 feet. It will be continued to the Madison limestone. Farther south and west, John Phillips and associates' No. 1, LSD 16, Section 16-20-3w5, is below 1,500 feet and carrying 16-inch casing.

In Section 28-18-2w5, South Turner Valley, British Dominion Oil & Development Corp.'s No. 4, LSD 6, is more than 130 feet in the lime below 5,980 feet after getting three shows of very wet gas in the Madison. Renfrew Royalties' No. 1, Morris & Goodfellow, LSD 3, same section, is below 5,700 feet and entering the lower Dalhousie formation, with the Madison anticipated around 5,900 feet. Considerable light crude from the upper Dalhousie is being bailed while drilling, and additional oil and some gas has been encountered.

Farther south, in Section 21-18-2w5, Union Freehold Oil Corp.'s No. 1, LSD 8, is fishing at 5,610 feet.

Eastern Alberta

In the Vermilion district, east-central Alberta, Tenwell Gas & Oil Co.'s No. 1, LSD 9, Section 36-50-7w4, is below 1,020 feet.

In the Vegreville district, Vegreville Gas Utilities' No. 1, Section 14-36-51w4, is below 1,897 feet.

Comrey Structure

In southeastern Alberta, Comrey Oil Co.'s No. 1, Section 9-1-5w4, on the Comrey structure, which has been standing at 208 feet, will be completed by the Comrey Syndicate, jointly financed by McDougall-Segur Oil & Gas Co. and McLeod Oil Co. of Calgary. The test was started last year by D. A. McDonald and associates on acreage secured from the North West Co., producing and development subsidiary of Imperial Oil, Ltd. The structure is about 65 miles east of Coutts, south of Medicine Hat, and in the second tier of sections north of the Montana boundary. The North West Co. originally held about 7,300 acres covered by the agreement with D. A. McDonald, and the McDougall-Segur company will put in about 2,400 acres leased subsequently. The McDougall-Segur and McLeod companies will share 50-50 in the Comrey Syndicate. Drilling is being resumed from 208 feet, with Roy Widney in charge. The structure has been geologized by Dr. T. A. Link of Imperial Oil, Lt., and other geologists, and the Madison limestone is looked for between 3,000 and 3,500 feet.

Border Fields

On the Del Bonita structure, Terminal Oil Co.'s No. 1, NE Section 18-1-21w4, will resume in September from 4,894 feet where 7-inch casing was cemented on top of the Madison lime. Some gas was encountered at the contact. Sunshine Oils, Ltd., which has a location in LSD 10, Section 19-1-21w4, on the same structure, has been registered in Alberta with L. A. Giroux of Edmonton as attorney, as a preliminary to active development work.

In the Taber area, southern Alberta, Plains Petroleum's No. 1 Thos. Engleston farm, LSD 12, Section 25-9-14w4, is rigged. It is about 1½ miles west of Taber, and the Sunburst sand is the primary objective.

Terminal Oil Co. has leased 11,000 acres on the Eldridge ranch southeast of Cardston from O. F. Malmberg, the lease calling for a test within a year and one each year thereafter.

British Columbia

In the Sage Creek area, southeastern British Columbia, Columbia Oils' No. 1 is arranging to deepen from 4,245 feet to at least 5,000 feet. Several fair shows of gas and light oil have been encountered.

Drilling in Saskatchewan

In the Simpson district, eastern Saskatchewan, Simpson Oil Co.'s No. 2, LSD 2, Section 11-29-24w2, is below 1,300 feet.

In the Lloydminster gas field, western Saskatchewan, Colony Oil & Gas Co.'s No. 2, a mile south of No. 1 gasser, is drilling. Lloydminster Gas Co., whose No. 1 well is supplying Lloydminster, will drill a second test for gas. Both companies are negotiating for franchises for communities near the field and as far southeast as Saskatoon.

Drilling in Ontario

In the Dover Field, Kent County, Ontario, Central Pipe Line Co.'s No. 2 Joseph Sterling farm, Lot 1, Front Concession, Dover East Township, got the Trenton limestone at about 2,910 feet and finished at 3,060 feet with a big gas flow from the upper pay in the Trenton. The settled flow was gauged at 3,500,000 feet a day with no water. It is being put in production, but later it will if necessary be deepened to the lower pay in the Trenton. E. P. Rowe's No. 1 Vital Duphette farm, Lot 2, Concession 4, is below 2,300 feet. South of the River Thames, E. P. Rowe's No. 1 Bruette farm, Lot 5, Front Concession, Raleigh Township, is below 1,850 feet.

In the De Clute Field, Kent County, Union Gas Co.'s No. 29, Lot 18, Concession 14, Raleigh Township, is below 1,600 feet without a show.

In the Eden Field, Elgin County, C. A. Simpson and associates have No. 3 rigged in N half Lot 23, Concession 8, Bayham Township. Location is a half mile south of Eden and about five-eighths mile west of Simpson's No. 2 gasser on the Williams farm, Lot 25, Concession 8.

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East and East Central Texas

NORTH CAYUGA IS EXTENDED, AND GAS FIELD AT LONG LAKE

By L. E. BREDBERG

DALLAS, Tex., Sept. 2.—The most important developments in East Texas during the past week were the extension of the North Cayuga area, approximately 3 miles to the east, and the extension of the gas producing area of the Long Lake area, approximately 1½ miles east into Leon County.

Clark and Cowden's No. 1 Wright, approximately three-quarters of a mile due east of Skelly Oil Co.'s No. 1 Williams, the nearest producer in the North Cayuga area, topped broken oil sand at 4,056 feet and cored to a total depth of 4,076 feet, the last 4½ feet being well saturated oil sand. It was taking a 24-hour potential test as the week ended and looked like it would make the best oil producer in the North Cayuga area. This well will cause the immediate drilling of offsets on all four sides—it is in the center of a 20-acre tract in I. Clendennen Survey.

Tide Water-Seaboard companies' No. 8 Goode, in F. Smith Survey, approximately 10,000 feet south of the nearest gas well in the Cayuga Field, was in ashy sand thought by operators to carry salt water at total depth of 4,043 feet.

Long Lake Field

The Long Lake gas field, in Anderson County, was extended about 1½ miles to the east by Tide Water-Seaboard companies' No. 1 Burkitt, which plugged back from 5,309 feet, then perforated 5½-inch casing from 5,245 to 5,260 feet and was completed as a large gas well along with considerable distillate, showing a pressure of 1,950 pounds on both tubing and casing.

Carrying out their plans to keep two drilling rigs active in Long Lake area, Tide Water-Seaboard companies made two new locations in the area during the past week, one of these their No. 2 Shaw and Cern which is a diagonal northwest offset to their No. 1 Shaw and Cern, producer. The other location is on the Johnson tract in Leon County, a short distance northwest of their No. 1 Burkitt.

Camp Hill Area

Gulf Production Co.'s No. 2-A Southern Pine Lumber Co., which missed the sub-Clarksville sand and is producing from the Woodbine sand at total depth of 5,236 feet, flowed 65 bbls. in 19 hours through one-quarter inch choke showing only five-tenths of 1 per cent B. S. & W. Production is decreasing and the well may be put on pump. Gulf started two more tests in the Camp Hill area during the past week, their No. 3 Davey and Royall and No. 1 McCain.

Freestone County

Stewart and Watson's No. 1 Burleson, approximately 3 miles east of Daniels Oil & Refining Co.'s gas wells on the Ball land, is moving in rig and will probably spud in this week. Clark and Cowden are tearing down the rig on their new well at Cayuga and moving over to this location. Two major companies have given good support to this test.

Angelina County

Lee-Tex Oil Co.'s No. 1 Thompson, in W. W. Whales Survey, approximately one-half mile southwest of Lee-Tex' No. 1 Guissler, has been abandoned at total depth of 2,324 feet in water sand. Y. D. Spell's No. 1 Thompson, 2½ miles north of Lee-Tex Oil Co.'s No. 1 Guissler, is also in water sand at total depth of 2,330 feet and is shut down for orders.

Navarro County

Wiggins and others' No. 1 D. A. Donoho, in J. Cauple Survey, 2 miles southwest of Corsicana, which has been shut down for several months at total depth of 1,439 feet, will set casing at about 1,187 feet.

EAST TEXAS FIELD

There were 66 completions in East Texas Field during the week, 2 dry holes, 11 pumpers and 10 completed as swabbers. There were 52 new locations made during the same period.

EAST TEXAS FIELD COMPLETIONS

Gregg County

Arkansas Fuel Oil Co.'s No. 13-A T. R. Lathrop, top sand 3,588 feet, total depth 3,612 feet, initial production 19 bbls. in 15 minutes; No. 4 G. B. Tennery, top sand 3,580-96 feet, total depth 3,603 feet shale, initial production swabbing 20 bbls. in 24 hours. Royal Petroleum Corp.'s (formerly Dearing & Son) No. 1 B. A. Skipper, top sand 3,558 feet, initial production 35 bbls. per hour through 2-inch tubing. Empire Gas & Fuel Co.'s No. 12 Jeter, top sand 3,614 feet, total depth 3,616 feet, initial production pumping 20 bbls. in 24 hours. Humble Oil & Refining Co.'s No. 20 Mackey, top sand 3,620 feet, total depth 3,628 feet, initial production 56 bbls. per hour.

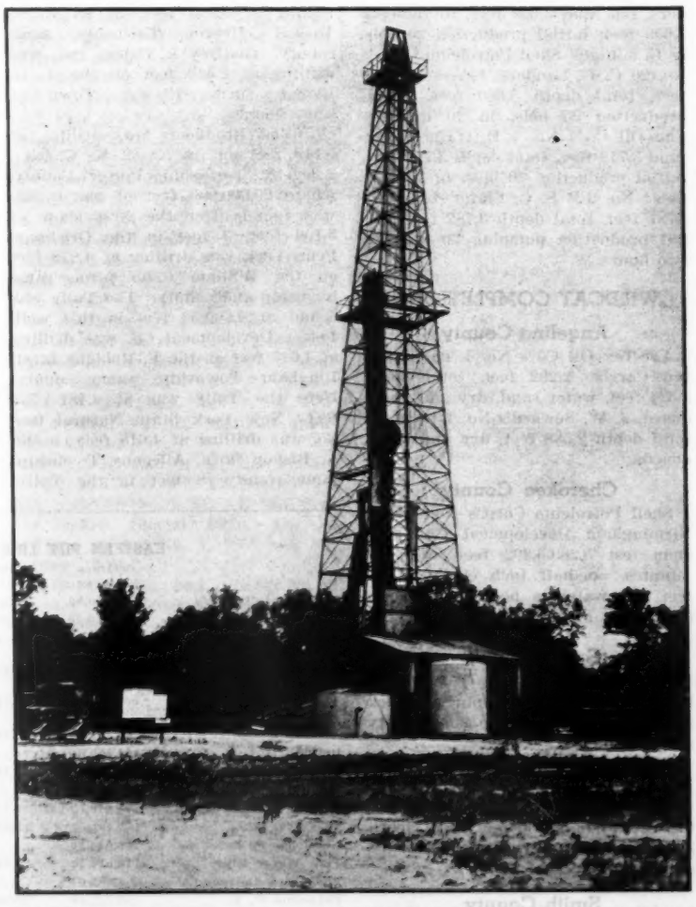
T. D. Humphrey's No. 10 Thomas, top sand 3,617 feet, total depth 3,630 feet, initial production 40 bbls. per hour. Jones & O'Brien's No. 8 McHaney-Loeb, top sand 3,505 feet, total depth 3,555 feet, initial production 35 bbls. in 20 minutes. Mabee and Consolidated's No. 6 Whitehurst, top sand 3,653 feet, total depth 3,656 feet, initial production 60 bbls. per hour. Neversuch Oil Co.'s No. 1 R. B. Porter, top sand 3,610 feet, total depth 3,655 feet shale, initial production swabbing small amount of oil, abandoned. Paul Scott's No. 1 D. W. McQueen, top sand 3,564 feet, total depth 3,578 feet, initial production 60 bbls. per hour.

Simms & Stanolind's No. 36-B Flewellen, top sand 3,693 feet, total depth 3,712 feet, initial production 10 bbls. in 10 minutes. Tripp-Mead Oil Co.'s No. 3 Sterdevar, top sand 3,614 feet, total depth 3,616 feet, initial production 50 bbls. per hour. C. H. Lyons' No. 5 S. G. Richards, top sand 3,508 feet, total depth 3,556 feet shale, initial production estimated 65 bbls. daily pumping. Yandle Rogers and others' No. 2 C. L. Still, top sand 3,552-3,635 feet, total depth 3,665 feet, initial production pumping 15 bbls. daily. Producers Investment's No. 6-B Rowland, top sand 3,544 feet, total depth 3,605 feet, initial production 34 bbls. per hour.

Shell Petroleum Corp.'s No. 8 Register, top sand 3,662 feet, total depth 3,668 feet, initial production 25 bbls. in 30 minutes; No. 58 J. B. Watson, top sand 3,537 feet, total depth 3,650 feet, initial production 40 bbls. in 30 minutes. E. L. Smith's No. 5 M. J. Register, top sand 3,615 feet, total depth 3,623 feet, initial production 60 bbls. per hour. L. L. Sugar and others' No. 4 G. Davis, top sand 3,637 feet, total depth 3,638 feet, initial production 40 bbls. in 15 minutes. Sun Oil Co.'s No. 14 G. Reese, top sand 3,637 feet, total depth 3,650 feet, initial production 40 bbls. per hour. W. E. West's No. 1-A King, top sand 3,654 feet, total depth 3,655 feet, initial production 96 bbls. per hour.

Rusk County

Fleetborn Oil Co.'s No. 2 Roberson, top sand 3,586 feet, total depth 3,626 feet, initial production swabbing 20 bbls. per hour. Tripel Oil Co.'s No. 4 E. Montgomery, top sand 3,553 feet, total depth 3,592 feet, swabbing 50 bbls. per hour. Gulf Production Co.'s No. 32-C C. E. Christian, top sand 3,704 feet, total depth 3,721 feet, initial production 50 bbls. per hour



Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 21-A Wills, Trinity sand test in Cayuga Field, northwest Anderson County, the deepest test yet drilled in the East Texas territory, has started drilling again, and has reached a total depth of 8,867 feet

through three-quarter inch choke. R. C. Lipscomb's No. 2 S. Jackson, top sand 3,719 feet, total depth 3,720 feet, initial production 19 bbls. in 30 minutes. J. C. Prine's No. 5 Warren, top sand 3,745 feet, total depth 3,746 feet, initial production 15 bbls. in 15 minutes. Hurtle Oil Co.'s No. 8 Sexton, top sand 3,609 feet, total depth 3,680 feet, initial production 20 bbls. per hour.

M. A. Walthrop's No. 1 Williams, top sand 3,552-83 feet broken, total depth 3,650 feet shale, initial production 30 bbls. per hour. Woodley Petroleum Co.'s No. 10-A Ladd, top sand 3,621 feet, total depth 3,630 feet, initial production 30 bbls. in 15 minutes. Arkansas Fuel Oil Co.'s No. 10 J. W. Wheelis, top sand 3,682 feet, total depth 3,706 feet, initial production 17 bbls. in 15 minutes. H. W. Donnell's No. 2 Propes, top sand 3,530 feet, total depth 3,591 feet, initial production swabbing 14 bbls. in 45 minutes. Elsep Oil Co.'s No. 4 E. L. Pinkston, top sand 3,537 feet, total depth 3,600 feet shale, initial production pumping 20 bbls. per hour. Fair & Thompson's No. 5-B Wiley, top sand 3,590 feet, total depth 3,657 feet shale, initial production 80 bbls. in three hours. F. W. Fisher's No. 7-B G. W. Eaton, top sand 3,724 feet, total depth 3,775 feet, initial production 80 bbls. hour.

H. B. W. Oil Co.'s No. 2 J. H. Henson, top sand 3,515 feet, total depth 3,575 feet, initial production swabbing 5 bbls. in two hours. Jenkins Oil Co.'s No. 9 Camp, top sand 3,542-52 feet, total depth 3,630 feet, initial production swabbing 200 bbls. in 10 hours. E. C. Laster and others' No. 1 Elliott, top sand 3,539 feet broken, total depth 3,579 feet shale, dry and abandoned. Luling Oil & Gas Co.'s No. 4 E. B. Alford, top sand 3,611 feet, total depth 3,675 feet, initial production 20 bbls. per hour. Marathon Oil Co.'s No. 28 S. H. Moore, top sand 3,650 feet, total depth 3,741 feet, initial production 61 bbls. per hour. Miller Production Co.'s No. 16 D. Bradford, top sand 3,525 feet, total depth 3,624 feet shale, initial production 30 bbls. per hour.

Octo Oil Co.'s No. 8 Tipps, top sand 3,528 feet, total depth 3,590 feet shale, initial production pumping 21 bbls. in three hours. Peachtree Oil Co.'s No. 4 W. H. Stroud estate, top sand 3,515 feet, total depth 3,570 feet, initial production pumping 50 bbls. in two hours. B. F. Phillips and others' No. 1 Herring, top sand 3,615 feet, total depth 3,618 feet shale, initial production pumping 75 bbls. daily. Sinclair-Prairie Oil & Gas Co.'s No. 64 Kinney, top sand 3,620 feet, total depth 3,628 feet, initial production 27 bbls. in 15 minutes; No. 65 Kinney, top sand 3,670 feet, total depth 3,677 feet, initial production 28 bbls. in 15 minutes.

Sutton & Hawkins' No. 3 Thompson, top sand 3,620 feet, total depth 3,655 feet shale, initial production 147 bbls. in six hours swabbing; No. 4 Thompson, top sand 3,641 feet, total depth 3,654 feet shale, initial production swabbing 122 bbls. in six hours. S. C. Cole and others' No. 1 H. Reese, top sand 3,818 feet, total depth 3,819 feet, initial production 20 bbls. in two hours. Vaughn Production Co.'s No. 8 Reagan, top sand 3,758 feet, total depth 3,773 feet, initial production 84 bbls. per hour. R. H. Vise's No. 5 W. O. Alford, top sand 3,784 feet, total depth 3,785 feet, initial production 40 bbls. per hour. West Texas Oil & Refining Co.'s No. 3 M. Talley, top sand 3,555-68 feet, total depth 3,600 feet, initial production swabbing 10 bbls. per hour. Braughton & Wilkerson's No. 1-B Bradford, top sand 3,515 feet, total depth 3,570 feet, swabbing 25 bbls. per hour.

Smith County

McKinney-Barr's No. 2 Green, top sand 3,810 feet, total depth 3,811 feet, initial production 28 bbls. 20 minutes. Alex McCutchin's No. 4 Jarvis, top sand 3,746 feet, total depth 3,748 feet, initial production 20 bbls. 20 minutes. M. H. McMurray's No. 17 Turner, top sand 3,843 feet, total depth 3,844 feet, initial production 20 bbls. in 15 minutes. Magnolia Petroleum Co.'s No. 33 Wright, top sand 3,659 feet, total depth 3,670 feet, initial production 33 bbls. in 15 minutes.

A. J. Sanders' No. 2 G. A. Cole, top sand 3,820 feet, total depth 3,821 feet, initial production 74 bbls. per hour. Sewell and others' No. 1 Cook, top sand 3,710 feet, total depth 3,711 feet, initial production 35 bbls. in 30 minutes. Sinclair-Prairie Oil & Gas Co.'s No. 11 B. Wilson, top sand 3,752 feet, total depth 3,755 feet, initial production swabbing 30 bbls. per hour. Texas Canadian Co.'s No. 7-C J. R. Irion, top sand 3,762 feet, total depth 3,765 feet, initial production 20 bbls. in 20 minutes.

Upshur County

O. V. Mullins' No. 3 Johnson, top sand 3,658 feet, total depth 3,665 feet, initial production 40 bbls. per hour. Nathan Oil Co.'s No. 1-B Victory, top sand 3,659 feet total depth, 35 bbls. in 40 minutes. Oils, Inc.'s No. 17 Sanders, top sand 3,600 feet, total depth 3,609 feet, initial production 20 bbls. in 15 minutes. Shell Petroleum Corp.'s No. 20 C. C. Landers, top sand 3,650 feet, total depth 3,660 feet, initial production 25 bbls. in 20 minutes. Sun Oil Co.'s No. 5 E. O'Byrne, top sand 3,718 feet, total depth 3,719 feet, initial production 20 bbls. in 30 minutes; No. 3-B S. C. Slater, top sand 3,781 feet, total depth 3,782 feet, initial production pumping 20 bbls. in two hours.

WILDCAT COMPLETIONS

Angelina County

Lee-Tex Oil Co.'s No. 1 Thompson, top Carrizo 2,292 feet, total depth 2,324 feet, water sand, dry and abandoned. J. W. Seward's No. 1 Darmon, total depth 2,588 feet, dry and abandoned.

Cherokee County

Shell Petroleum Corp.'s No. 1 New Birmingham Development Co., drill stem test 5,280-5,302 feet, open 10 minutes, one-half inch choke; 1,000 feet salt water in hole; total depth 5,302 feet; abandoned.

Gregg County

O. T. Clark's No. 1 T. Q. Williams, total depth 3,771 feet, plugged back to 3,710 feet, bailed no shows; dry and abandoned.

Hunt County

Long & Wolfe's No. 1 Chapman, top Cretaceous 2,630 feet, total depth 2,649 feet in lower Cretaceous; dry and abandoned.

Smith County

Harrison and others' No. 1 W. R. Rushing, total depth 4,683 feet, plugged back to 4,330 feet, tested salt water, junked and abandoned.

Completions and Operations in New York-Pennsylvania Gas Field

By R. C. CONINE

COUDERSPORT, Pa., Sept. 2.—A 24,000,000-foot a day gasser completed by Sylvania Natural Gas Corp. on the Merle A. Hill farm, Genesee Township, Potter County, at 5,177 feet, featured in the Oriskany sand operations of the New York-Pennsylvania gas belt in the week ending August 30. Schrack and others found the sand at 4,668 feet on the M. M. Loring farm, Willing Township, Allegany County, but the hole started filling with salt water and the drill stopped at 4,672 feet. Sanderson and others completed a test on the Leon Bennett farm, Granger Township, same county, at 3,186 feet, without a show. United Producers was deepening its big gasser on the K. Currier farm.

Pennsylvania Operations

Penn United was drilling at 2,243 feet on the C. Wainwright farm, Lawrence Township, Tioga County. Cowanesque Natural Gas was drilling at 5,667 feet on the E. A. Furman farm, Allegany Township, Potter County. Hanley & Bird was drilling at 5,273 feet on the George Burd farm, after reaching the Tully lime at 5,261 feet, and casing at 5,273 feet. Wyoga Oil & Gas Co. was fishing at 5,405 feet on its No. 3 Tassell, Hebron Township, same county. Godfrey L. Cabot, Inc., was drilling at 2,440 feet on the A. G. Lyman farm, Ulysses Township, same county.

United Producers was drilling at 5,119 feet on its No. 2 K. Currier, Allegany Township, Potter County, where 29,000,000 feet of gas a day was found after the first show at 5,100 feet, 3 feet in the Oriskany. Penn York was drilling at 4,810 feet on the William Cobb farm, same township and county. The Tully was found at 4,600-54 feet in this well. Potter Development Co. was drilling at 4,645 feet on the F. Robbins farm, Bingham Township, same county. Here the Tully was at 4,481-4,533 feet. New York State Natural Gas Co. was drilling at 4,618 feet on the A. Bishop farm, Allegany Township, same county, 8 feet in the Tully. Sylvania was drilling at 2,700 feet on its No. 4 James, same township and county. Godfrey L. Cabot, Inc., staked a location on the Duke estate, Genesee Township, same county.

New York Operations

Godfrey L. Cabot, Inc., was moving in on the Murray estate, Belfast Township, Allegany County. Hungiville and others were moving in on the L. Putnam farm, Urbana Township, Steuben County, and Wyoga Oil & Gas Co. was moving in on the Estee farm, Charlotte Township, Chautauqua County. Trumbull and others were drilling at 1,050 feet on the W. B. Lasher farm, Throop Township, Cayuga County, after an extended shutdown. Southwestern Natural Gas Co. was casing at 4,429 feet on the T. Moran farm, Alma Township, Allegany County; after finding 150,000 feet of gas 1 foot in the sand at 4,429 feet. Godfrey L. Cabot, Inc., was fishing at 975 feet on the Alice Cunningham farm, Willing Township, same county. Same company was drilling at 100 feet on the Dora Barber farm, same township and county.

Becker and others were drilling at 730 feet on the Burns farm, Alma Township, Allegany County. Cunningham Natural Gas Co. was drilling at 440 feet on its No. 2 Regan, Willing Township, same county. Godfrey L. Cabot, Inc., had a location on the C. Moynihan farm, same township. Wyoming Natural Gas Co. was shut down at 1,783 feet on the C. H. Caulling farm, York Township, Livingston County. John Seton and others were drilling at 1,330 feet on the M. Youskiewies farm, Rome Township, Oneida County. Hanley & Bird were rigging up on the M. Ackley farm, Greenwood Township, Steuben County. Property Shares, Inc., was drilling at 850 feet on the Ivar Ringdahl farm, Rome Township, Oneida County. Godfrey L. Cabot, Inc., was drilling at 1,310 feet on the Aikens farm, Lewis Township, Lewis County. The Trenton was found at 1,082 feet in this test.

EASTERN PIPE LINE REPORT FOR JULY

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	547,350.99	511,162.25	786,656.75	595,446.06	622,340.50
S. W. Pa. P. L.	475,260.30	80,972.28	786,181.56	562,542.59	342,460.97
Eureka P. L.	874,972.84	283,300.54	357,137.22	335,538.71	199,824.28
Buckeye P. L. (Macksburg)	228,963.18	232,750.83	203,719.47	348,961.91	100,391.09
Buckeye P. L. (Lima, etc.)	2,002,730.99	65,784.34	2,377,645.53	1,248,647.12	1,112,459.89
Buckeye P. L. (Cleveland)	63,541.39	12,194.72	241,654.33	1,213.88	243,875.66
Indiana P. L.	404,323.04	.....	1,348,008.78	1,013,171.71	351,220.66
Pure Oil	539,722.00	989,298.00	35,573.00	1,007,258.00	.....
Southern P. L.	107,300.27	.....	30,659.73	35,573.42	27,586.80
Bradford Tran.	341,410.82	532,922.32	.....	524,666.18	.....
N. Y. Transit	151,791.57	37,629.76	212,821.99	200,983.19	.....
Northern P. L.	206,034.50	.....	442,401.69	112,228.08	358,571.47
Tide Water Pipe	715,024.72	23,633.57	430,242.07	440,064.01	.....
Tuscarora Dev.	4,285.61	.....	.....	251,491.75	.....
Valvoline P. L.	98,712.68	74,707.92	.....	55,155.23	20,007.59
Other companies	181,886.79	344,415.88	.....	230,238.95	584.26
Total July	6,943,322.69	2,988,762.41	7,252,712.12	6,873,180.25	3,379,323.17
Total June	6,786,815.51	2,777,549.37	6,932,286.65	6,639,875.38	3,176,175.21
Difference	+156,507.18	+211,213.04	+320,425.47	+233,304.87	+203,147.96

Oklahoma Operations

By JAMES McINTYRE

WILDCATS HOLD ATTENTION; ALLOWABLE IS UNCHANGED

The Continental Oil Co.'s No. 1 McCarthy, C SW SW Section 12-1-7, in the Jesse area in Pontotoc County, continued as one of the most closely watched drilling wells in Oklahoma at the close of the week in review. It has been running about 300 feet high on structure, having topped Hunton lime at 3,488 feet with a series of gas showings to 3,530 feet, the last reported depth before this review was closed.

Another important test in that general area is Carter Oil Co.'s No. 1 Thompson, C S half NE NW Section 34-2-9, in the Centrahoma area in Coal County, drilling at 5,234 feet.

The Stanolind Oil & Gas Co. and Amerada Petroleum Corp. have two wells at, or close to, a critical stage in Lincoln County, several miles apart. They are located west of the West Chandler Pool on seismograph highs. No. 1 Connelly, SE NE SE Section 23-14-2, cored 10 feet of dolomite and Simpson dense from 5,174-85 feet and from 5,185-95 feet cored dolomite with a slightly salty taste and some white sand. The other test in the NW NW NW Section 4-14-3, about 4¼ miles northeasterly from the Connelly farm test, was reported to have cored at 5,100-05 feet, the recovered core showing oil saturation in streaks. The last named well is less than half mile from a well of Sinclair Prairie Oil Co. in Section 5-14-3, which came in as a producer.

An agreement between the producers in the Wilcox sand zone in the Oklahoma City Pool and the State Corporation Commission that potentials of wells in that zone be reduced 70 per cent effective on September 1 was reached Saturday. Operators have the option of taking a production or open-flow test if they desire. Such tests will be of six hours duration with the last four-hour production being multiplied by six to arrive at a potential.

The Corporation Commission placed the market demand for Oklahoma crude in September at 491,194 bbls., the same as in August, but made some changes in individual pools.

The record of results in completed work, new work started and near completions in the State for the past week in review follows:

Logan County

In the old Marshall Pool, Logan County, the Shell Petroleum Corp. plugged back in No. 3 Story, SW SE SW Section 30-19-4w, from 5,997 feet to 4,000 feet and perforated pipe at 3,920-60 feet and got a hole full of water. J. S. Cosden had a like experience in No. 1 Gardner, NE NE NW Section 31-19-4w, when he plugged back from 6,185 feet to 4,037 feet and perforated at 3,880-4,000 feet. The water in both cases came from Tonkawa sand which had yielded paying production in some wells that had been plugged back from the Wilcox.

Sinclair Prairie Oil Co.'s No. 1 Foree, NE cor. Section 1-16-1w, was acidized in Dolomite at a total depth of 5,283 feet and swabbed 20 bbls. of oil the first two hours.

No completions were reported from Logan County in the past week in review. Gypsy Oil Co. was getting ready to build derrick for No. 1 McDermott, SE SW NW Section 28-17-4w, in the Crescent Pool.

Osage County

Completions in Osage County in the week in review included the following wells:

Bay Oil Co.'s No. 2, SW SE SE Section 14-26-6, abandoned at 3,059 feet. All formations were dry. The hole was bottomed in lime.

Champlin Refining Co.'s No. 4 Fletcher, 321 feet west and 990 feet north of SE cor. Section 4-25-6, shot Bartlesville sand with 40 quarts at 2,704-34 feet, flowed 206 bbls. in 24 hours. This well is in the South Burbank Pool.

Carter Oil Co.'s No. 9 Denoya, SW NW SW Section 10-25-6, South Burbank Pool, Bartlesville sand at 2,806 feet, oil at 2,824 feet, total depth 2,851 feet. Flowed 113 bbls. the first hour and 1,160 bbls. in 17 hours.

Mid-Continent Petroleum Corp.'s No. 1, NW NW SE Section 30-22-8, shot with 10 quarts at 2,910-15 feet. Pumped 8 bbls. in 24 hours. Total depth is 3,017 feet.

Barnsdall Oil Co.'s No. 30, 908 feet from north and 172 feet from west lines of NE quarter Section 30-21-9, dry and abandoned at 419 feet, sand at 394-402 feet.

Norbla Oil Co.'s No. 1, NW SW SW Section 4-20-10, dry and abandoned at 334 feet.

Enterprise Transit Co. has rig up for No. 5, C NW NE NE Section 34-26-6, and for No. 6, SE NE NW Section 35-26-6. Sinclair Prairie Oil Co. had rig up for No. 1, SW cor. NE Section 15-24-7.

Carter Oil Co. and others' No. 7 Ducotey, 1,280 feet from south and 1,280 feet from west lines of SE quarter Section 3-25-6, South Burbank Pool, Osage County, had Bartlesville sand at 2,722-53 feet. It averaged 43 bbls. per hour for six hours and was shut in for pipe line connection.

Phillips Petroleum Co.'s No. 1 Scott, SE SE NE Section 4-25-6, was a 10-bbl. well after a shot in sand at 2,858-83 feet, and was shut down for orders.

Lincoln County

Magnolia Petroleum Co. got a Skinner sand well in No. 4 Wagner, NE SE SE Section 2-14-3, Chandler Pool, Lincoln County. It was plugged back from 5,051 feet to 4,460 feet and the casing ripped at 4,439-60 feet and the sand shot.

Texas Co. was building rig for No. 4 Hoover, C SE NW SE Section 33-14-4.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Purcell, NW cor. Section 4-14-3, West Chandler Pool, topped Wilcox sand at 5,093 feet and drilled to 5,105 feet. There was a small showing of oil. The crew will set pipe.

Texas Co.'s No. 3 Niccum, SE SW NW Section 28-14-5, which got salt water in Wilcox sand at 4,851-63 feet, was plugged back to 4,550 feet and shot with 40 quarts at 3,745-70 feet. It yielded only mud and water and the hole was plugged back to 3,575 feet to test Prue sand topped at 3,565 feet. This is a wildcat.

Oklahoma Production

Estimated daily average production of Oklahoma for the week ending August 31 and for the preceding week is as follows:

	Barrels	
	Aug. 31	Aug. 24
Allen	7,650	7,275
Asher-West Asher	1,175	1,200
Burbank	8,200	8,200
South Burbank	11,100	10,600
Balance Osage	26,000	26,100
Blackwell	4,725	4,750
Bristow-Slick	9,100	9,150
Chandler	4,750	4,500
Crescent	3,550	4,250
Cromwell	4,325	4,325
Cushing-Shamrock	13,450	13,500
Duncan district	4,450	4,400
Edmond	3,225	5,800
Fish	10,625	9,900
Fitts	16,300	15,875
Gray	1,660	1,975
Graham	4,125	4,100
Healdton	9,200	9,350
Hewitt	4,500	4,450
Holdenville	1,450	1,475
Keokuk	1,225	3,400
Konawa	1,775	1,800
Lucien	9,525	9,175
Marshall-Lovell	1,100	1,100
Oklahoma City	127,750	141,350
Papoose	1,225	1,200
Polo	2,750	2,900
Sasakwa and Townsite	2,725	2,650
Sholem-Alechem	3,900	3,925
Seminole Field:		
Bowlegs	9,775	11,100
Carr City	5,300	6,150
Earlsboro	9,125	9,550
East Earlsboro	9,650	9,850
South Earlsboro	1,050	1,025
Little River	14,025	13,650
East Little River	900	900
Maud	1,000	1,125
Mission	2,825	3,000
Seminole	11,750	11,900
East Seminole	1,250	1,400
Searight	3,175	5,175
Total Seminole	69,825	74,825
St. Louis-Pearson	24,000	24,900
Tatums	4,575	4,575
Tonkawa-Garber-Thomas	5,750	5,750
Wewoka	3,575	3,550
Yale-Jennings	4,950	5,100
Other pools	57,495	57,650
Total Oklahoma	471,700	495,025

Noble County

Midco Oil Corp. completed its No. 1-A Neil, 400 feet from south and 800 feet from west lines of SE quarter Section 15-23-2w, in the old Billings Pool in Noble County. It flowed 216 bbls. in 24 hours through casing. Tubing was run and the well completed. It had sandy Dolomite at 4,130-4,244 feet.

In the Polo Pool, Noble County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 3 Kolb, 390 feet north and 600 feet west of C Section 33-20-2w, flowed 160 bbls. in 24 hours on its completion test. It produces from second Dolomite sand topped at 5,044 feet, total depth 5,133 feet. The well had been shot.

Atlantic Oil Producing Co. and Empire Oil & Refining Co. had cellar and pits dug for No. 1 Glenn, C NW SW Section 9-20-1w.

Phillips Petroleum Co.'s No. 1-A T. P. O'Neil, SE cor. Section 16-23-2w, in the Billings Pool, Noble County, had a hole full of oil at 4,295 feet.

In the Polo Pool, Noble County, Stanolind Oil & Gas Co.'s No. 1 Hentges, NE cor. Section 33-22-2w, after a six-day shut-in period, flowed 91 bbls. in 6½ hours and quit. It produced from sand at 4,858-66 feet.

In the Lucien Pool, Carter Oil Co.'s No. 4 Weber, 810 feet north and 810 feet east of SW cor. Section 20-20-2w, was rigging up standard tools to drill deeper. It had flowed 789 bbls. in 26½ hours from Wilcox sand at 5,064-66 feet, top of the sand 5,055 feet, total depth 5,080 feet. Stanolind Oil & Gas Co.'s No. 3 Frederick, C SE SE Section 28-20-2w, which made 52 bbls. in 24 hours after a shot in sand at 5,146-56 feet, was acidized with 1,000 gallons with no results. It was shut down at 5,165 feet.

Carter Oil Co.'s No. 1 Pfeiffer, C N half NW SE Section 33-20-2w, had first Wilcox sand at 4,970 feet and flowed 324 bbls. in 4½ hours. At 4,990-98 feet it flowed 756 bbls. in 11 hours, total depth 5,023 feet.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Pfeiffer, 1,170 feet south and 660 feet west of C Section 33-20-2w, increased its production from 252 bbls. per day to 441 bbls. per day, when it reached second Wilcox sand at 4,985-5,026 feet, and was drilling at 5,040 feet. First Wilcox lay at 4,898-4,934 feet.

Phillips Petroleum Co.'s No. 1 Lee, C NE NW Section 3-19-2w, in the Lucien Pool, but in Logan County, which drilled into water at 5,075 feet, was plugged back to 5,067 feet and flowed 175 bbls. of oil in 24 hours, top of the sand 5,001 feet.

Oklahoma County

Gypsy Oil Co. and Indian Territory Illuminating Oil Co.'s No. 1 Salisbury, NW NE NE Section 13-14-4w, Oklahoma County, north and west of the Edmond Pool, was abandoned as a failure after it had been drilled to 6,730 feet, and Schlumberger test showed salt water at the bottom. It had the top of the Wilcox sand at 6,643 feet.

In the Edmond Pool, Johnston & Kemnitz' No. 1 Price, SW SE NW Section 30-14-3w, was completed. It

flowed 362 bbls. in four hours from Wilcox sand at 6,672-6,700 feet.

Mid-Continent Petroleum Corp.'s No. 6 Young, NW NW NE Section 31-14-3w, was put on the completion list after it had flowed a potential of 1,140 bbls. of oil in four hours. It produced gas at the rate of 7,500,000 feet. Wilcox sand at 6,632-6,701 feet, supplied the pay.

In the Oklahoma City Field, Phillips Petroleum Co. completed No. 2 Freeburg, 974 feet north and 1,165 feet west of C Section 34-12-3w. It had Wilcox sand at 6,322-6,520 feet, total depth 6,525 feet. It flowed 785.97 bbls. of oil in four hours on gas-lift through 3-inch tubing, giving it a rated potential of 3,153.88 bbls. per day.

Harrell-Davis' No. 1 Wallace, 452 feet from north and 1,000 feet from east lines of SE quarter Section 22-11-3w, made a potential of 559.14 bbls. per day from Cleveland sand at 5,742-5,818 feet, still in that sand.

Phillips Petroleum Co. had derrick corners in for No. 1 Wellar, 626 feet north and 918 feet east of C Section 34-12-3w, Oklahoma City Pool.

In the Oklahoma City Field, Westgate Oil Co.'s No. 7 Carey, 657 feet south and 275 feet east of C Section 34-12-3w, sprayed oil and produced 2,000,000 feet of gas per day at a total depth of 6,513 feet. Wilcox sand was topped at 6,360 feet.

Champlin Refining Co.'s No. 1 Sutton, 1,144 feet south and 1,070 feet east of NW cor. Section 35-12-3w, at a total depth of 6,391 feet, was tested for four days, producing 1,128 bbls. the first day, then 325 bbls., 273 bbls., and 220 bbls. on subsequent days. It made about 7,500,000 feet of gas the first day. It was to be deepened.

North of Britton, Sinclair Prairie Oil Co.'s No. 1 Corbett, NE NW NE Section 17-13-3w, bailed two days and lowered the fluid level to 2,800 feet. It was shut in and the following day when opened flowed first by heads and then steadily putting 135 bbls. of salt water with a trace of oil into the tank in one hour. The total depth is 6,685 feet. It will be recalled that this well early in July made 783 bbls. of oil in 15 hours with gas at the rate of 20,000,000 feet, from sand at 6,645-6,706 feet, but water broke in from the bottom of the hole. It was cored to 6,733 feet and plugged back to present depth.

Northern Pontotoc County

Sunray Oil Co.'s No. 17 McCall, SE cor. NE NW Section 17-5-8, Pontotoc County, an old completion, plugged back from 2,620 feet to pay at 2,285-2,305 feet made a 35-bbl. pumper after shot.

In the Fitts Pool

In the Fitts Pool, southern Pontotoc County, five wells were completed: Phillips Petroleum Co.'s No. 15 Norris, SE SW SW Section 25-2-6, had Bromide sand at 4,095 feet, sands at 4,205 feet and 4,280 feet, total depth 4,102 feet. It flowed 917 bbls. the first hour and 717 bbls. the second hour through casing, and 94 bbls. in 39 minutes through tubing, with gas at the rate of 7,500,000 feet per day.

Skelly Oil Co.'s No. 1 Minnie Auker, SE SW NE Section 36-2-6, the most southerly of all the oil wells in the pool, made a potential production of 1,512 bbls. per day together with 2,750,000 feet of gas after it had been treated twice with enormous loads of acid. It was given 4,000 gallons of acid and then 7,500 gallons in Bromide formation at 4,393-4,435 feet.

Moore and others' No. 7 Schauers, SE SE NW Section 29-2-7, flowed 350 bbls. in two hours on gas-lift, then 214 bbls. in two hours naturally. It had Bromide at 4,055 feet, sands at 4,160 feet and 4,220 feet, McLish at 4,265-85 feet, total depth. It is a Bromide sand producer.

Moore and others' No. 5 Wirick, SW SW SE Section 29-2-7, had Bromide at 3,815 feet, sands at 3,919 feet and 3,985 feet, McLish at 4,037-44 feet, total depth. It flowed 972 bbls. in four hours through casing with gas at the rate of 14,500,000 feet per day. It is a Bromide sand well.

New work in Pontotoc County includes Sunray Oil Co.'s No. 19 McCalla, NE cor. Section 17-5-8; Mexhoma Oil Co.'s No. 2 Butler, SW cor. Section 21-5-8, spudding: Thomas and others' No. 3 Gilmore, C W half NW NW Section 28-5-8, rigging up machine. All of the foregoing are in the Allen district. There was no work reported in the Fitts Pool.

Near Completions

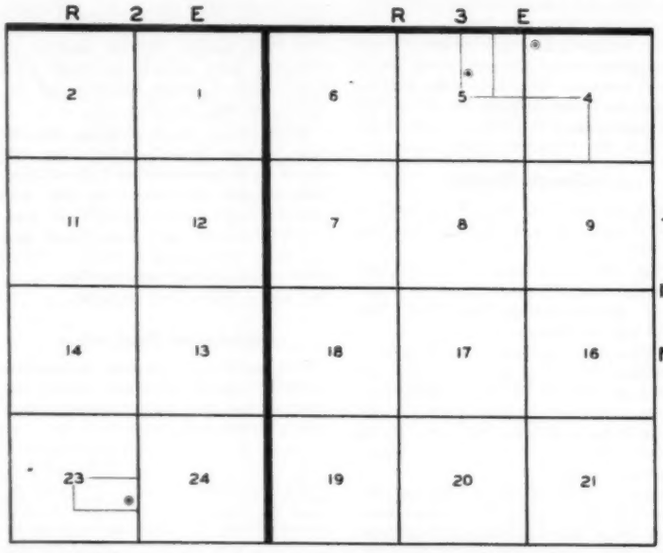
In the Fitts Pool proper, Burke-Greis Oil Co. acidized with 2,000 gallons and a 180-bbl. oil load in its No. 2 Chambers, NW NE NW Section 36-2-6, which earlier had produced 1,479 bbls. of oil through casing in 14 hours, the oil being cut 1 to 2 per cent by salt water. It had been drilled to 4,419 feet and plugged back to 4,299 feet. Same company will deepen No. 3 Chambers, NE NW NW Section 36-2-6, which would not flow after it had been treated with 3,000 gallons of acid and a 600-bbl. oil load. It had first Bromide sand at 4,310-31 feet, total depth. No. 4 Chambers, SE NE NW Section 36, had Bromide at 4,290 feet and first sand at 4,403-33 feet, and was treated with 4,000 gallons of acid and a 338-bbl. oil load.

Amerada Petroleum Corp.'s No. 2 Smith, NE SW NW Section 28-2-7, had Bromide at 3,965 feet and was drilling at 3,995 feet. Another near completion is Magnolia Petroleum Co.'s No. 4 Simpson, NW SE NE Section 29-2-7, which found Bromide at 4,050 feet and first sand at 4,150 feet and was drilling at 4,200 feet with standard tools.

Carter Oil Co.'s No. 3 Julia Smith, SW NE NE Section 31-2-7, topped Bromide at 3,781 feet, sand at 3,866 feet and 3,966 feet, and McLish at 3,981 feet, total depth 3,995 feet. Tubing was being run.

Moore and others' No. 2 Mitchell, NE SW NW Section 31-2-7, mentioned in last week's reports as having a hole full of salt water, had this sand record: Bromide at 4,350 feet, sands at 4,313 feet and 4,386 feet, showing about 5 bbls. per hour; McLish at 4,460 feet, McLish sand at 4,500-10 feet, 4,518-40 feet, 4,616-20 feet, sandy Dolomite at 4,620-30 feet, water level at 4,645 feet, total depth 4,680 feet.

Moore and others' No. 1 Witherspoon, NW SE NW Section 31-2-7, was acidized in sand at 4,485-4,520 feet, total depth. It produced 110 bbls. of oil in 24 hours on gas-lift. It was to be re-acidized. McLish was topped at 4,255 feet.



Stanolind-Amerada tests in Lincoln County, Oklahoma, are close to critical stages and are being closely watched by operators

Major County Test Dry

Indian Territory Illuminating Oil Co. and Continental Oil Co.'s No. 1 Fairview, 700 feet from south and 670 feet from west lines of SE quarter Section 32-22-14w (corrected location), was dry and abandoned at 7,451½ feet. A drill stem test was taken at 6,850-6,920 feet but it recovered only 600 feet of mud. There was no oil except showings and stains at any depth.

Pittsburg County

Utilities Production Co.'s No. 1 Carney, SW SW NW Section 17-7-18, in the Pittsburg County gas region, showed 1,250,000 feet of gas at a total depth of 2,100 feet. It had 390 pounds rock pressure. The well was not a completion.

Grant County

Westgate Oil Co.'s No. 1 Clark, NW NE NW Section 17-29-4w, in northern Grant County, had Simpson at 4,782 feet and drilled to 4,797 feet. Liner was set at 4,782 feet. The well was swabbed and produced 6 bbls. of oil every hour and 30 minutes but could only swab down to the bottom of the 8-inch casing at 4,716 feet. The hole will be deepened.

Helmerich & Payne's No. 1 Crouse, C NE SW Section 29-25-8w, in southwestern Grant County, has reached contract depth, 6,502 feet, and was shut down for orders. It topped Sylvan shale at 6,446 feet.

Greater Seminole

Olympic Oil Co.'s No. 1 Dixon-B, NW SE NW Section 12-9-8, was completed in the Senora formation at 1,698-1,757 feet, which was shot with 20 quarts. The well flowed 276 bbls. in 24 hours. The Senora formation lies just under the Calvin sand. Another Senora producer completed in the last week was Potco Oil Co.'s No. 1-A Dixon, an old well deepened from 1,490 feet to Senora at 1,698-1,756 feet. It flowed 125 bbls. in 24 hours. The well is in SW NE NW Section 12-9-8. The Senora formation was named by J. A. Taff, of the U. S. Geological Survey in 1901, and the term was probably derived from the old post village of the same name in what is now southern Okmulgee County. George B. Morgan, in Bulletin No. 2 of the Oklahoma Geological Survey, says of it in writing of the Stonewall Quadrangle: "In a section measured through the central parts of Sections 3 and 10 in Township 3n-7e (Pontotoc County), the Senora was found to be 125 feet thick. At the base of the formation there is about 35 feet of sandstone with only a few thin beds of interstratified shale . . . Above the basal sandstone to the top of the formation shales are prominent, but interbedded with these are brown and yellowish-brown sandstones . . . The Senora formation is correlated with the middle portions of the Palo Pinto formation of Texas and is equivalent to a part of the Marmaton of Kansas and Missouri."

Magnolia Petroleum Co.'s No. 2 Reed, SE SW SW Section 27-8-8, Seminole County, was completed in Wilcox sand at 4,246-62 feet, total depth. It pumped 150 bbls. of oil and 6 bbls. of water in 24 hours.

Newt Barrett's No. 1 Brandenburg, NW SE NE Section 3-7-4, St. Louis area, Pottawatomie County, swabbed 1,032 bbls. in 48 hours on its completion test, producing from Dolomite at 4,098-4,111 feet, total depth. It was not acidized.

In the Fish Pool in Seminole County, Stanolind Oil & Gas Co. completed No. 2 Sarkey-B, NW NW SE Section 31-7-8. It swabbed 390 bbls. of oil and 115 bbls. of water in 19 hours at a total depth of 4,315 feet. It was an old well deepened from 4,214 feet.

Empire Oil & Refining Co. abandoned the location for No. 1 Harjo, NE NW SW Section 13-6-5, Seminole County.

Gypsy Oil Co. completed No. 3-A Grayson, 915 feet from south and 990 feet from west lines, NW quarter Section 13-6-5, Grayson Pool, Seminole County. It produces from Simpson Dolomite topped at 3,760 feet, with three separate pay streaks, total depth 3,830 feet.

Magnolia Petroleum Co. made a location for No. 2 Brown, C E half SW NW Section 14-10-6, Seminole County; Burke-Greis, a location for No. 1 McDaniel, NE NE SW Section 31-10-6; Potco Oil Co. drilling at 100 feet in No. 2-A Dixon, 125 feet from the east and 990 feet from north lines of NW quarter Section 12-9-8, Seminole County; Fleetborn Oil Co., rigging up rotary for No. 4 Stump, SW SE SW Section 27-8-8; Magnolia Petroleum Co., rig up for No. 6 Denby (twin), 250 feet north and 392 feet west of C Section 11-7-6, Seminole

County; Burke-Greis Oil Co., a location for No. 2 Yetcha, 150 feet from the west and 155 feet from south lines of NW quarter Section 29-7-8, Hughes County; Empire Oil & Refining Co., rigging up rotary for No. 2 Davis-A, SW NE NE Section 30-7-8, Seminole County.

Carter Oil Co. and others' No. 1 Ferguson, C E half SW NW Section 11-10-6, Keokuk area, had Misener sand at 4,180-92 feet, total depth. It swabbed 185 bbls. of oil in 18 hours and flowed 96 bbls. in 10 hours while tubing was being run.

Magnolia Petroleum Co. and others' No. 1 Agnew, C E half NE NW Section 14-10-6, had Misener sand at 4,127 feet with an oil showing and was rigging up standard tools, total depth 4,128 feet.

Carter Oil Co. and others' No. 2 Douglass, C W half SE NW Section 18-10-6, had Wilcox sand at 4,590-96 feet, total depth. It swabbed 101 bbls. in 11 hours. It was drilled to 4,605 feet and the crew was testing.

Okfuskee County

Burke-Greis Oil Co. has a 28,000,000-foot initial gas producer in No. 1 Scott, SW SW NW Section 20-10-10, Okfuskee County, from sand at 2,936-56 feet, total depth. It showed a 780-pound rock pressure. The well was shut in and completed.

Simms and others' No. 1 Barnett, NW NE NE Section 13-10-11, Okfuskee County, was dry and abandoned at 2,581 feet. It was plugged back to sand at 1,650-75 feet which tested dry.

Sherry and others made a location for No. 1 Washington, SW SW NE Section 21-13-7, on a seismograph high.

Devonian Oil Co.'s No. 1-B Mary Hawkins, SW NE NE Section 3-11-11, Okfuskee County, was shut down at 3,778 feet with a hole full of water from Wilcox sand topped at 3,665 feet. No oil was reported.

Ray Vincent and others' No. 1 Richmond, NE NE SE Section 17-12-11, had Cromwell sand at 2,928 feet with a showing of gas but the hole filled with water at 2,930 feet. It was shut down.

Indian Territory Illuminating Oil Co.'s No. 1 Church, SW NW NW Section 13-6-5, Seminole County, was shot with 120 quarts in Dolomite at 3,790-3,838 feet. The crew was cleaning out and the hole will be re-acidized.

Sinclair Prairie Oil Co.'s No. 2 Diamond, SE cor. Section 12-6-7, Seminole County, an old well plugged back from 4,119 feet to 3,180 feet and the casing ripped, swabbed 89 bbls. of oil and 5 bbls. of water in 24 hours.

Pittsburg Pipe & Supply Co.'s No. 1-A Harris, SW SW NW Section 18-6-8, Seminole County, found 100,000 feet of gas in shale at 2,793-98 feet; had sand at 2,798-2,836 feet from which 140 bbls. of oil was swabbed in 24 hours. It was then shot with 60 quarts and the crew was cleaning out.

Stewart Egan and others' No. 3 Brister, SW NW NE Section 28-7-4, St. Louis area, Pottawatomie County, had Simpson Dolomite at 4,095 feet, total depth 4,130 feet. It had been treated with acid and later swabbed oil and water. The operation was shut down.

Malarnee and others' No. 1 West estate, SE SE NW Section 33-7-6, Seminole County, swabbed about 30 bbls. of oil in eight hours at 2,957 feet, total depth, and was standardizing.

Blackwell Oil & Gas Co.'s No. 5 Ferguson, 700 feet from north and 185 feet from west lines of NW quarter Section 29-7-8, Fish Pool, Hughes County, flowed 240 bbls. of oil in one hour from Wilcox sand at 4,105-08 feet, total depth.

Champlin Refining Co.'s No. 8 See, 990 feet south and 1,170 feet east of C Section 30-7-8, Fish Pool, Seminole County, was plugged back from 4,253 feet where it had water in the Wilcox sand, to 4,112 feet, and Dolomite pay tested. It swabbed 125 bbls. of oil and 700 bbls. of water in 24 hours. Dolomite was topped at 4,106 feet.

Vandeventer and others' No. 1-A Bender, a wildcat, in NE NE SW Section 3-8-8, Seminole County, swabbed 60 bbls. of oil in two hours from Gilcrease sand at 3,170-3,202 feet and was then shot with 3 quarts and was being cleaned out.

Wood Oil Co.'s No. 2 Lincoln, NE SW SW Section 28-9-6, had sandy Dolomite at 4,103 feet and Wilcox sand at 4,108-14 feet, total depth, and the hole filled 500 feet with oil.

Beckham County

West Oak Oil & Gas Co.'s No. 1 Murray, C W half NE SE Section 10-9-25w, in Beckham County in southwestern Oklahoma, is a 20,000,000-foot gasser from Dolomite pay at 3,241-3,507 feet, total depth, and was completed.

Caddo County

Wasteka Oil Co. was drilling at 207 feet with rotary tools in No. 1 Milton, SW cor. SE Section 26-6-10w, Caddo County in the Cement area.

Grady County

Magnolia Petroleum Co. was deepening No. 1 Rockhold, C NE NW Section 11-4-8w, Grady County, old total depth 1,429 feet, drilling at 1,750 feet. The same company's No. 2 Rockhold, C SE NW Section 11, which was deepened from 1,435 feet to 1,915 feet, got a sand at 1,870-85 feet and a 1,640,000-foot gas production, with 700 pounds rock pressure, and same company's No. 1 Smith, C NE NE Section 11, also drilled deeper from 1,730 feet to 1,950 feet, proved to be a 1,250,000-foot gas producer with 700 pounds rock pressure. Sand lay at 1,910-22 feet. Magnolia Petroleum Co. was rigged up to deepen No. 6 Harrison, NW NE NE Section 28-3-5w, Grady County, old total depth 1,795 feet.

Southern Fields

In the Altus Field in Jackson County, Gypsy Oil Co. completed No. 2 Edwards, SW SE SE Section 3-1n-20w. It made a 44-bbl. flow in 24 hours through 2-inch tubing set at 1,415 feet, producing from granite wash at 1,393-35 feet, bottomed in brown shale at 1,427 feet. In the same pool, Gypsy Oil Co.'s No. 1 Eby, SW SE SE Section 10-1n-20w, was a 47-bbl. completion in granite wash at 1,385-1,419 feet, total depth 1,420 feet, in shale.

George Pace and others' No. 1-A Damron, SE SE SW Section 25-2s-6w, Stephens County, was dry and abandoned at 1,910 feet. It had a barren sand series at 1,623 to 1,798 feet.

Schermerhorn Oil Co.'s No. 1 Rice, SW SE SE Section 35-4s-4e, Marshall County, was abandoned at 1,055 feet. It had Tulip sand at 1,052-53 feet which yielded only sulphur water.

Nocona Products, Inc., SW SW SW NE Section 16-7s-5w, Jefferson County, made a 20-bbl. pumper completed in sand at 774-90 feet. It had Conglomerate from 790-817 feet, total depth.

Ben G. Barnett made a location for No. 3 Lynn, NE NW NE Section 31-1s-2w, Carter County; George Pace and others spudded No. 9-B Houston, 690 feet south and 150 feet west of C Section 2-2s-8w, Stephens County. Coline Oil Co. has started to deepen No. 10 Pierce, NE NE NE Section 18-2s-2w, Carter County, from its old total depth 1,870 feet; Franklin & Duncan are deepening No. 1 Woolsey, NW cor. SE Section 10-3s-6w, Stephens County, from 440 feet and was drilling at 680 feet; Godfrey & Neff made location for No. 1 Ned, 1,100 feet south and 1,000 feet east of NW cor. Section 29-4s-6e, Marshall County, a wildcat; Nocona Products, Inc., made a location for No. 2 Penniston, NE cor. SW Section 16-2s-5w, Stephens County; G. L. Priest was rigging up machine for No. 5 Cope-Sublett, SW SE NE Section 1-8s-5e, Marshall County.

In Atoka County, Mid-Continent Petroleum Corp.'s No. 1 Fulton, SW cor. Section 19-1s-12, was shut down for orders at 3,000 feet. C. W. Whitehead and others' No. 1 Messer, SE SW SW Section 35-3s-18, Pushmataha County, is shut down at 3,385 feet. This is a test on a 5,000-acre block and is being deepened from the old total depth of 2,405 feet.

In Bryan County, Trio Oil Co. has a flowing water well at its last reported depth. No. 1 Gibert, NW SW SW Section 25-8s-7e, hit the water sand at 891-902 feet and went into shale to 902 feet, total depth. It was shut down for orders.

Carter Oil Co. was drilling at 7,200 feet in its deep test, No. 1 Carter-Williams, SW NE SW Section 27-2s-3w, Carter County, even though the contract depth called for only a 7,000-foot test.

Twin State Oil Co.'s No. 1 Bridenthal, NW NE NE Section 9-1s-3w, Carter County, pumped 146 bbls. of oil on a 24-hour test, producing from 2,660-2,700 feet where casing was shot. It had been drilled to 3,001 feet and plugged back.

Tracts to Be Offered at Osage Lease Sale

Seventy-nine tracts, all of them of 160 acres excepting one, will be offered for leasing for oil in the Osage Indian Nation at an auction to be held in Pawhuska, Okla., on Tuesday, September 24.

The list of tracts follow:

Tr. No.	Description	Acres
1	NE 18-22-12	160
2	NE 29-23-12	160
3	NW 29-23-12	160
4	SE 29-23-12	160
5	SW 29-23-12	160
6	NW 29-21-11	160
7	SW 1-22-11	160
8	SE 2-22-11	160
9	NE 11-22-11	160
10	NW 12-22-11	160
11	SE 23-22-11	160
12	SW 23-22-11	160
13	NE 26-22-11	160
14	NW 26-22-11	160
15	NE 33-22-11	160
16	NW 16-23-11	160
17	SW 19-23-10	160
18	SE 17-21- 9	160
19	SW 17-21- 9	160
20	Fr. NW 32-21- 9	99.08
21	SW 30-22- 9	160
22	NE 19-23- 9	160
23	NW 19-23- 9	160
24	SE 24-23- 9	160
25	SE 26-23- 9	160
26	SW 26-23- 9	160
27	SW 7-24- 9	160
28	NW 8-24- 9	160
29	SW 8-24- 9	160
30	SW 14-24- 9	160
31	NE 33-24- 9	160
32	NE 1-26- 9	160
33	NW 14-22- 8	160
34	NE 22-23- 8	160
35	NW 23-23- 8	160
36	NW 5-24- 8	160
37	SW 5-24- 8	160
38	SE 12-24- 8	160
39	SE 28-24- 8	160
40	NE 33-24- 8	160
41	SW 5-25- 8	160
42	NW 6-25- 8	160
43	NW 8-25- 8	160
44	SW 27-25- 8	160
45	SW 31-26- 8	160
46	NE 5-23- 7	160
47	SE 5-23- 7	160
48	SE 8-24- 7	160
49	NW 14-24- 7	160
50	NE 17-24- 7	160
51	SE 17-24- 7	160
52	SE 20-24- 7	160
53	SW 29-24- 7	160
54	NE 34-24- 7	160
55	SE 34-24- 7	160
56	NW 7-25- 7	160
57	SW 17-25- 7	160
58	NE 19-25- 7	160
59	NW 20-25- 7	160
60	NW 1-26- 7	160
61	SW 1-26- 7	160
62	NW 2-26- 7	160
63	NW 28-29- 7	160
64	SW 28-29- 7	160
65	NE 29-29- 7	160
66	SE 29-29- 7	160
67	NW 10-23- 6	160
68	SW 10-23- 6	160
69	NW 1-25- 6	160
70	SW 1-25- 6	160
71	NW 9-25- 6	160
72	SW 9-25- 6	160
73	NE 12-25- 6	160
74	NE 17-25- 6	160
75	SE 26-26- 6	160
76	SW 26-26- 6	160
77	SE 27-26- 6	160
78	SE 23-26- 4	160
79	SW 24-26- 4	160
Total		12 579.08

General view of the prolific South Burbank Field, Osage County, Oklahoma, where six tracts will be offered at next Osage sale

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Summary of California Field Operations for July, 1935

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for July amounted to 17,417,910 bbls., an average of 561,868 bbls. per day. This is an increase of 4,906 bbls. per day over June production.

CRUDE PETROLEUM PRODUCTION

(Figures of Production and Stocks are in barrels of 42 gals.)

	Total production July	Daily average July, 1935	Daily average June, 1935	Daily average July, 1934
Group No. 1:				
Belridge-North	204,929	6,611	6,585	5,726
Belridge-South	79,461	2,563	2,659	2,201
Coalinga	624,803	20,155	19,681	21,313
Edison	86,012	2,775	2,241	238
Elk Hills	287,605	9,278	8,414	8,753
Fruitvale	164,631	5,311	4,912	3,952
Kern River	351,894	11,351	11,220	10,680
Kettleman Middle Dome	.....	.....	.....	168
Kettleman North Dome	1,905,602	61,471	61,690	67,001
Lost Hills	150,983	4,870	4,818	4,710
McKittrick	125,253	4,040	3,750	3,145
Midway-Sunset	1,672,226	53,943	52,731	56,998
Mountain View	891,457	28,757	21,764	6,400
Mount Poso	400,276	12,912	13,631	10,827
Round Mountain	187,175	6,038	6,045	5,083
Wheeler Ridge	13,009	420	431	428
Group No. 2:				
Capitan	48,091	1,551	1,359	650
Elwood	442,203	14,265	13,726	11,660
Rincon	66,168	2,134	2,088	1,537
San Miguelito	28,080	906	911	922
Santa Barbara	98,625	3,181	3,393	647
Santa Maria	136,957	4,418	4,898	5,379
Summerland	1,078	35	38	52
Ventura Avenue	945,687	30,506	35,162	28,721
Ventura-Newhall	119,242	3,847	3,747	4,251
Watsonville	1,860	60	58	60
Group No. 3:				
Brea-Olinda	289,890	9,351	10,173	11,979
Coyote-East	86,322	2,785	2,770	2,995
Coyote-East	286,855	9,253	9,546	9,810
Dominguez	617,102	19,907	21,009	19,931
Huntington Beach	1,322,447	42,660	44,749	46,945
Inglewood	368,479	11,886	11,414	9,979
Lawndale	3,468	112	128	138
Long Beach	2,402,381	77,496	74,394	67,625
Los Angeles-Salt Lake	25,389	819	843	801
Montebello	196,363	6,334	6,117	5,522
Newport	.....	.....	3	.....
Playa Del Rey	678,364	21,883	22,235	8,714
Potrero	10,950	353	439	417
Richfield	232,112	7,487	7,537	8,587
Rosecrans	84,782	2,735	2,701	3,209
Santa Fe Springs	1,240,771	40,025	39,212	41,490
Seal Beach	287,144	9,262	9,867	9,799
Torrance	219,568	7,083	6,834	7,342
Whittier	32,216	1,039	1,039	1,093
Total July	17,417,910	561,868	556,962	517,878
Total June	16,708,859	556,962		
Increase	709,051	4,906		

OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abnd. wells: Drillers	Abnd. wells: Producers
Group No. 1:							
Belridge-North	1	7	...	.....	27	...	...
Belridge-South	...	...	...	.....	163	...	...
Coalinga	...	1	2	65	984	2	...
Edison	2	6	2	511	39	4	...
Elk Hills	...	1	...	.....	167	...	...
Fruitvale	2	1	3	1,366	74	...	...
Kern River	5	5	4	1,181	1,449	2	...
Kettleman Middle Dome	...	2	...	.....	.....	...	...
Kettleman North Dome	3	22	6	37,270	116	...	...
Lost Hills	...	1	...	.....	333	...	...
McKittrick	1	2	...	.....	210	...	...
Midway-Sunset	6	4	3	891	2,484	3	1
Mountain View	5	12	8	20,882	84	1	..
Mount Poso	5	8	3	1,649	192	...	...
Round Mountain	3	3	2	1,393	62	1	..
Wheeler Ridge	...	...	...	.....	35	...	...
Group No. 2:							
Capitan	2	1	...	.....	13	...	...
Elwood	1	3	1	2,790	48	...	...
Rincon	...	...	...	.....	31	...	...
San Miguelito	...	1	...	.....	1	...	...
Santa Barbara	...	2	1	421	70	1	1
Santa Maria	1	3	...	.....	184	1	...
Summerland	...	...	...	.....	17	...	...
Ventura Avenue	1	9	2	237	206	...	1
Ventura-Newhall	3	14	1	20	535	2	...
Watsonville	...	...	...	.....	7	...	...
Group No. 3:							
Brea-Olinda	...	1	...	.....	360	...	...
Coyote-East	...	...	...	.....	82	...	...
Coyote-West	1	3	...	.....	45	...	...
Dominguez	6	6	3	2,110	81	...	...
Huntington Beach	...	3	3	1,450	491	1	1
Inglewood	...	5	2	432	213	...	...
Lawndale	...	1	...	.....	6	...	...
Long Beach	6	65	12	3,887	1,202	2	2
Los Angeles-Salt Lake	...	...	...	.....	128	...	...
Montebello	2	5	1	230	171	...	...
Newport	...	1	...	.....	.....	...	...
Playa Del Rey	...	16	5	5,069	191	1	...
Potrero	...	...	...	.....	13	...	...
Richfield	...	1	...	.....	242	...	...
Rosecrans	...	...	...	.....	72	...	...
Santa Fe Springs	5	5	3	983	515	...	...
Seal Beach	...	1	2	841	112	...	...
Torrance	1	1	...	.....	477	...	1
Whittier	...	...	...	.....	161	...	...
Miscellaneous drilling	9	41	...	.....	.....	12	...
Group No. 4:							
Buttonwillow gas field	1	1	...	.....	23	...	...
Delano gas field	...	...	1	Gas	.....	1	...
Dudley Ridge gas field	...	1	...	.....	1	...	...
Goleta gas field	...	1	...	.....	.....	...	...
Semi-Tropic gas field	8	6	8	Gas	2	...	...
Total July	80	272	78	83,678	12,120	34	7
Total June	107	260	74	69,807	12,016	32	14
Increase	*27	12	4	13,871	104	2	*7
Average for year 1934	53	196	58	47,553	11,053	21	17
Average for year 1933	30	124	21	22,842	9,199	14	18
Average for year 1932	18	108	15	13,069	8,928	16	14

*Decrease.

U. S. Bureau of Mines Statistics for June, 1935

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS

(Thousands of barrels of 42 gallons)

	June, 1935		May, 1935		Jan.-June,	Jan.-June,
	Total	Daily av.	Total	Daily av.	1935	1934
Arkansas	935	31.2	965	31.1	5,520	5,548
California:						
Huntington Beach	1,342	44.8	1,189	38.4	7,229	7,433
Kettleman Hills	1,851	61.7	1,675	54.0	11,137	10,050
Long Beach	2,232	74.4	2,027	65.4	12,023	11,632
Santa Fe Springs	1,176	39.2	1,135	36.6	6,878	7,575
Rest of State	10,108	336.9	9,316	300.5	53,859	49,788
Total Calif.	16,709	557.0	15,342	494.9	91,126	86,478
Colorado	115	3.8	123	4.0	773	523
Illinois	358	12.0	382	12.4	2,075	2,300
Indiana	64	2.1	66	2.1	371	407
Kansas	4,607	153.6	4,736	152.8	27,137	22,993
Kentucky	427	14.2	464	15.0	2,624	2,198
Louisiana:						
Gulf Coast	3,435	114.5	3,406	109.9	18,125	9,167
Rest of State	686	22.9	734	23.7	4,160	4,652
Total Louisiana	4,121	137.4	4,140	133.6	22,285	13,819
Michigan	1,235	41.2	1,234	39.8	6,758	5,343
Montana	380	12.7	384	12.4	2,096	1,448
New Mexico	1,680	56.0	1,675	54.0	9,720	8,091
New York	336	11.2	360	11.6	2,058	1,792
Ohio:						
Central and Eastern	256	8.6	278	9.0	1,586	1,606
Northwestern	80	2.6	85	2.7	466	499
Total Ohio	336	11.2	363	11.7	2,052	2,105
Oklahoma:						
Oklahoma City	4,805	160.1	5,071	163.6	28,793	33,653
Seminole	4,040	134.7	4,182	134.9	23,384	19,461
Rest of State	6,683	222.8	6,962	224.6	39,813	39,730
Total Oklahoma	15,528	517.6	16,215	523.1	91,990	92,844
Pennsylvania	1,285	42.8	1,414	45.6	7,945	7,102
Texas:						
Gulf Coast	5,116	170.5	5,213	168.2	30,739	29,296
West Texas	4,502	150.1	4,612	148.8	27,193	24,305
East Texas	15,144	504.8	14,954	482.4	87,613	91,399
Panhandle	1,729	57.6	1,894	61.1	10,866	9,650
Rest of State	6,204	206.8	6,410	206.7	36,733	32,944
Total Texas	32,695	1,089.8	33,083	1,067.2	193,144	187,594
West Virginia	317	10.6	349	11.2	1,975	2,021
Wyoming:						
Salt Creek	499	16.6	539	17.4	3,142	3,228
Rest of State	707	23.6	616	19.9	3,374	2,841
Total Wyoming	1,206	40.2	1,155	37.3	6,516	6,069
Other*	4	.....	4	.....	20	5
Total United States	82,338	2,744.6	82,454	2,659.8	476,185	448,680

*Includes Missouri, Tennessee, and Utah.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 gallons)

	June, 1935		May, 1935		Jan.-June,	Jan.-June,
	Total	Daily av.	Total	Daily av.	1935	1934
CRUDE PETROLEUM:						
Runs to stills	81,724	2,724	80,412	2,594	460,105	435,664
MOTOR FUEL:						
Production	38,925	1,298	38,599	1,245	219,562	204,852
Imports:						
Bonded warehouses	.....	.....	.....	.....	20	.....
For domestic use	.....	.....	.....	.....	.....	1
Exports*	3,222	107	2,141	69	12,797	13,192
Stocks: Gasoline	53,141	.....	55,196	.....	53,141	54,217
Stocks: Nat. gasoline	5,851	.....	5,977	.....	5,851	4,574
Domestic demand	37,884	1,263	39,089	1,261	199,540	192,164
KEROSENE:						
Production	4,417	147	4,474	144	28,233	26,445
Imports	.....	.....	.....	.....	.....	.....
Exports	634	21	520	17	3,402	4,802
Stocks	8,310	.....	7,295	.....	8,310	6,325
Domestic demand	2,768	92	3,545	114	22,919	21,865
GAS AND FUEL OIL:						
Production	27,861	929	28,508	920	162,225	160,167
Transfers†	611	20	1,001	32	5,754	4,395
Imports:						
Bonded warehouses	1,065	36	1,075	35	5,987	5,380
For domestic use	841	28	554	18	4,899	1,373
Exports	2,464	82	1,678	54	11,832	13,938
Stocks	103,674	.....	100,177	.....	103,674	109,377
Domestic demand	24,417	814	27,010	871	173,755	171,004
Railroad (Class I)‡	(§)	(§)	3,854	124	¶19,076	¶17,864
Pub. util. pow. plants‖	852	28	851	27	4,954	5,060
Other	23,565	786	22,305	720	149,725	148,080
Bunker oil, foreign	2,406	80	2,532	82	14,315	15,030
Bunker oil, coastwise	1,919	64	2,107	68	12,718	12,209
LUBRICANTS:						
Production	2,247	75	2,392	77	13,402	13,325
Imports	.....	.....	.....	.....	.....	.....
Exports	731	24	602	19	4,128	4,057
Stocks	6,855	.....	6,897	.....	6,855	6,752
Domestic demand	1,558	52	1,919	62	9,750	9,546
WAX (thous. of pounds):						
Production	31,360	1,045	41,160	1,328	225,120	250,320
Imports:						
Bonded warehouses	.....	.....	.....	.....	224	3,110
For domestic use	2,298	77	2,531	82	13,575	23,113
Exports	18,153	605	15,830	511	104,773	97,813
Stocks	141,506	.....	145,982	.....	141,506	108,087
Domestic demand	19,981	666	26,032	840	128,776	139,476
COKE (short tons):						
Production	135,200	4,507	132,000	4,258	732,400	653,200
Stocks	424,000	.....	416,400	.....	424,000	504,100
ASPHALT (short tons):						
Production	350,000	11,667	307,600	9,923	1,369,800	*1,140,100
Imports (natural)	1,800	60	400	13	22,200	10,700
Stocks	435,200	.....	423,900	.....	435,200	358,000

*Includes benzol, 47,239 bbls. in June, 1935. †Net transfers in California. ‡I.C.C. §Not available. ¶January-May. ‖U. S. Geol. Survey.

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 gallons)

	June, 1935		May, 1935		Jan.-June,	Jan.-June,
	Total	Daily av.	Total	Daily av.	1935	1934
Refinery gasoline:						
Straightrun	18,510	617	18,315	590	104,115	102,968
Cracked	17,580	586	17,330	559	97,369	85,610
Natural gasoline:						
Production	3,008	100	3,085	100	18,610	17,509
Deduct losses	310	10	276	9	1,400	2,140
Benzol	137	5	145	5	868	905
Total Motor Fuel	38,925	1,298	38,599	1,245	219,562	204,852

STOCKS OF CRUDE PETROLEUM BY STATES

(Thousands of barrels of 42 gallons)

	Location[1]					Origin[2]	
	June 30, 1935				May 31,	June 30,	May 31,
	At refineries	At tank farm and in pipe line	Leases	Total	1935, total	1935, total	1935, total
Arkansas	717	3,200	270	4,187	4,203	4,542	4,665
California	6,939	24,444	1,899	33,282	33,233	33,282	33,233
Colorado	297	93	30	420	412	521	512
Georgia[3]	668	..	...	668	634	...	...
Illinois	1,476	10,875	100	12,451	12,374	11,700	11,671
Indiana	1,338	1,882	8	3,228	3,593	31	36
Kansas	2,314	10,451	420	13,185	13,227	5,692	6,126
Kentucky[4]	448	396	40	884	987	890	995
Louisiana[5]	5,660	5,848	440	11,948	12,265	9,611	9,119
Maryland	1,236	...	...	1,236	1,247	...	...
Massachusetts[6]	1,060	...	...	1,060	1,101	...	...
Michigan	138	595	90	733	884	922	1,011
Missouri[7]	167	3,324	...	3,491	3,602	...	...
Montana	250	1,121	100	1,471	1,528	1,470	1,519
New Jersey	6,005	368	...	6,373	6,408	...	...
New Mexico	9	446	290	745	699	5,313	5,293
New York	1,343	119	18	1,480	1,502	496	491
Ohio	1,059	6,636	70	7,765	8,268	1,012	1,089
Oklahoma	2,945	73,166	1,720	77,841	78,789	102,952	104,563
Pennsylvania	5,288	2,099	100	7,487	7,308	2,829	2,664
Texas	12,755	100,499	2,950	116,204	117,460	118,908	120,982
Utah	214	...	...	214	217	...	...
West Virginia	56	1,779	145	1,980	2,172	1,868	1,922
Wyoming[8]	12,141	13,923	360	26,424	26,446	26,526	26,548
U. S. Total	64,523	261,174	9,060	334,757	338,559	330,565	334,439

[1]Segregated by states of location regardless of origin. [2]Segregated by states of production (origin) regardless of location, exclusive of foreign crude. [3]Includes South Carolina and Virginia. [4]Includes Tennessee. [5]Includes Alabama. [6]Includes Rhode Island. [7]Includes Iowa. [8]Includes Nebraska and South Dakota.

RECORD OF WELLS FOR IMPORTANT FIELDS AND DISTRICTS, JUNE, 1935*

	Completions			Total initial prod. (bbls.)	Aver. initial prod. (bbls.)	Drilling end month
	Oil	Gas	Dry			
Texas	760	18	233	769,900	1,010	1,154
East Texas	424	1	12	678,400	1,600	229
Gulf Coast	59	2	32	27,900	470	133
Panhandle	29	1	2	16,000	410	161
West Texas	49	1	10	22,100	450	202
California	74	..	32	69,800	940	260
Kettleman Hills	2	..	113	7,100	3,550	24
Long Beach	7	..	3	2,600	370	64
Oklahoma	115	8	42	58,300	510	482
Pontotoc Co. (Fitts)	19	4	3	15,800	830	69
Seminole district	19	..	2	12,400	650	44
Louisiana	27	8	22	14,700	540	131
Gulf Coast	23	1	14	14,200	620	64
Rest of State	4	7	8	500	130	67
Other States	409	69	110	120,000	290	1,082
Total United States:						
June, 1935	1,385	103	439	1,032,700	750	3,109
May, 1935	1,467	104	473	1,245,700	850	3,012
June, 1934	1,126	124	363	1,104,300	980	2,963
Jan.-June, 1935	7,416	700	2,355	6,402,500	860	3,109
Jan.-June, 1934	5,802	576	1,916	5,640,900	970	2,963

* From The Oil and Gas Journal and California office of the American Petroleum Institute.

STOCKS HELD BY REFINING COMPANIES, JUNE 30, 1935

(Thousands of barrels of 42 gallons)

	Finished gasoline					Gas oil and distillate fuel oils
	At refineries	Bulk and pipe lines	Unfinished gasoline	Total gasoline	Kerosene	
East Coast	6,080	10,666	859	17,605	2,247	4,574
Appalachian	1,364	1,053	345	2,762	226	216
Ind., Ill., Ky., etc.	5,902	4,051	846	10,799	730	2,510
Okla., Kans., Mo.	3,724	1,557	704	5,985	428	924
Texas Inland	1,449	120	279	1,848	158	248
Texas Gulf	4,770	443	1,847	7,060	2,186	3,729
Louisiana Gulf	612	609	271	1,492	780	2,071
Ark. & La. Inland	235	110	37	382	25	49
Rocky Mountain	1,047	.....	105	1,152	146	139
California	7,316	2,033	1,073	10,422	1,384	5,772
Total	32,499	20,642	6,366	59,507	8,310	20,232

	Residual fuel oil	Lubricants	Wax (thous. of pounds) Crude scale	Wax (thous. of pounds) Refined	Wax (thous. of pounds) Total
East Coast	6,604	2,161	27,235	27,328	54,563
Appalachian	359	800	16,007	2,533	18,540
Ind., Ill., Ky., etc.	2,823	510	17,015	1,531	18,546
Okla., Kans., Mo.	2,821	534	3,831	692	4,523
Texas Inland	2,009	91	.....	330	330
Texas Gulf	7,193	1,604	1,351	23,310	24,661
Louisiana Gulf	2,653	85	887	1,770	2,657
Ark. & La. Inland	601	32	.....	.....	.....
Rocky Mountain	485	96	16,686	1,000	17,686
California	57,894	942	.....	.....	.....
Total	83,442	6,855	82,012	58,494	141,506

	Coke (tons)	Asphalt (tons)	Road oil	Miscellaneous	Other unfinished	Natural gasoline
East Coast	24,300	122,300	32	64	8,120	237
Appalachian	8,800	15,300	12	34	1,991	5
Ind., Ill., Ky., etc.	52,700	112,400	252	20	5,726	31
Okla., Kans., Mo.	41,800	10,200	223	29	5,725	72
Texas Inland	18,700	.....	68	7	990	6
Texas Gulf	85,800	10,600	15	27	11,043	249
Louisiana Gulf	29,800	33,300	15	3	1,579	2
Ark. & La. Inland	200	45,100	29	2	474	2
Rocky Mountain	78,100	9,500	375	9	1,779	49
California	83,800	76,500	267	52	5,118	2,453
Total	424,000	435,200	1,288	247	42,545	3,106

Grand total stocks refned products, 227,445,000 bbls.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	June, 1935	May, 1935	June, 1934	Jan.-June, 1935	Jan.-June, 1934
Motor fuel turned into lines	3,992	4,101	4,072	23,520	20,971
Motor fuel delivered from lines	4,366	4,266	4,134	23,338	21,051
Shortage	16	16	*1	134	42
Stocks in lines and working tanks end of month	2,091	2,481	1,192	2,091	1,192

*Overage.

SUPPLY AND DEMAND OF ALL OILS

(Thousands of barrels of 42 gallons)

	June, 1935	May, 1935	June 1934	Jan.-June, 1935	Jan.-June, 1934
NEW SUPPLY:					
Domestic production:					
Crude petroleum	82,338	82,454	80,040	476,185	448,680
Daily average	2,745	2,660	2,668	2,631	2,479
Natural gasoline	3,068	3,055	2,883	18,610	17,509
Benzol*	137	145	160	868	905
Total production	85,483	85,684	83,028	495,663	467,094
Daily average	2,849	2,764	2,768	2,738	2,581
Imports†					
Crude petroleum:					
Bonded warehouses	292	474	310	3,438	1,281
For domestic use	2,555	2,959	3,265	11,964	16,392
Refined products:					
Bonded warehouses	1,065	1,075	876	6,008	5,392
For domestic use	923	566	261	5,138	1,519
Total new supply, all oils	90,319	90,758	87,750	522,211	491,678
Daily average	3,011	2,928	2,925	2,885	2,716
Decrease in stocks, all oils	287	1,198	‡2,995	‡3,905	12,405
DEMAND:					
Total demand	90,606	91,956	85,655	518,306	504,083
Daily average	3,020	2,966	2,855	2,819	2,785
Exports:					
Crude petroleum	5,589	4,613	3,795	22,432	18,842
Refined products	7,362	5,133	6,056	33,605	37,121
Domestic demand:					
Motor fuel	37,884	39,089	36,296	199,540	192,164
Kerosene	2,768	3,545	2,372	22,919	21,865
Gas oil and fuel oil	24,417	27,010	23,961	173,755	171,004
Lubricants	1,558	1,919	1,569	9,750	9,546
Wax	71	93	87	460	497
Coke	534	531	563	3,231	4,204
Asphalt	1,733	1,531	1,602	6,421	5,181
Road oil	873	478	1,262	2,068	2,921
Still gas (production)	4,368	4,411	3,707	24,023	20,959
Miscellaneous	161	187	148	1,086	884
Losses and crude used as fuel	3,288	3,416	4,237	19,016	18,895
Total domestic demand	77,655	82,210	75,804	462,269	448,120
Daily average	2,589	2,652	2,527	2,554	2,476
STOCKS:					
Crude petroleum	334,757	338,559	357,229	334,757	357,229
Natural gasoline	5,851	5,977	4,574	5,851	4,574
Refined products	227,445	223,804	227,995	227,445	227,995
Total, all oils	568,053	568,340	589,808	568,053	589,808
Days' supply	188	192	207	202	212

*From Coal Division. †Imports of crude as reported to Bureau of Mines; imports of refined products from Bureau of Foreign and Domestic Commerce. ‡Increase.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	June, 1935 Total	June, 1935 Daily av.	May, 1935 Total	May, 1935 Daily av.	Jan.-June, 1935	Jan.-June, 1934
Appalachian:						
Pennsylvania Grade	1,963	65.5	2,179	70.3	12,459	12,285
Other (inc. Kentucky)	694	23.1	584	18.9	3,570	3,105
Lima-N.E. Ind.-Mich.	1,430	47.7	1,302	42.0	7,147	5,948
Ill.-S.W. Ind.	382	12.8	504	16.3	2,314	2,636
Mid-Continent:						
N. La. and Ark.	1,609	53.6	1,475	47.6	9,153	11,283
W. Tex.-S.E. N. Mex.	6,502	216.8	6,426	207.3	35,985	35,627
East Texas	15,828	527.6	15,945	514.4	87,593	93,676
Other (Okla., Kans., N. Tex., etc.)	31,521	1,050.7	29,264	944.0	172,146	149,622
Gulf Coast	7,812	260.4	7,047	227.3	43,800	37,783
Rocky Mountain	1,805	60.2	1,889	60.9	9,523	7,477
California*	16,108	536.9	16,526	533.1	90,324	83,027
Other†	4	.....	4	.....	20	5
Total demand	85,660	2,855.3	82,145	2,682.1	474,034	422,474
Exports	5,589	186.3	4,613	148.8	22,432	18,842
Domestic demand	80,071	2,669.0	78,532	2,533.3	451,602	423,632
Foreign petroleum	2,776	92.5	3,016	97.3	15,001	17,122
Total dom. demand	82,847	2,761.5	81,548	2,630.6	466,603	440,754

*Demand less net transfers from crude. †Includes Missouri, Tennessee and Utah.

RUNS TO STILLS AND OUTPUT OF REFINERIES, JUNE, 1935

(Thousands of barrels of 42 gallons)

INPUT—	Crude runs: Domestic	Crude runs: Foreign	Crude runs: Total	Unfin. rerun (net): Crude gaso.	Unfin. rerun (net): Other	Natural gasoline
East Coast	11,888	2,307	14,195	24	141	31
Appalachian	3,231	.....	3,231	16	68	14
Ind., Ill., Ky., etc.	11,687	.....	11,687	122	–191	150
Okla., Kans., Mo.	9,486	.....	9,486	–92	–122	291
Texas Inland	5,100	.....	5,100	28	–156	275
Texas Gulf	16,387	330	16,717	–183	–452	88
Louisiana Gulf	3,468	126	3,594	29	–109	16
Ark. & La. Inland	1,632	.....	1,632	.....	–143	25
Rocky Mountain	1,701	.....	1,704	4	26	41
California	14,278	.....	14,278	–26	92	*1,059
Total	78,961	2,763	81,724	–79	–865	2,090

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thous. of lbs.)
East Coast	5,876	727	1,624	3,532	590	12,720
Appalachian	1,646	259	182	465	410	5,880
Ind., Ill., Ky., etc.	6,731	542	944	1,405	211	1,960
Okla., Kans., Mo.	5,242	702	728	1,750	248	2,240
Texas Inland	2,739	203	292	1,406	25	280
Texas Gulf	7,264	991	1,692	4,114	539	4,760
Louisiana Gulf	1,322	330	665	750	39	1,120
Ark. & La. Inland	617	76	90	501	21	.....
Rocky Mountain	878	47	126	305	27	1,400
California	5,865	603	1,862	6,039	135	.....
Total	38,180	4,417	8,205	20,267	2,247	31,360

OUTPUT (Cont'd.)	Coke (tons)	Asphalt (tons)	Road oil	Still gas	Miscellaneous	Shortage
East Coast	12,200	156,600	58	835	53	110
Appalachian	2,000	11,700	2	229	23	104
Ind., Ill., Ky., etc.	57,600	66,600	262	940	24	46
Okla., Kans., Mo.	19,000	2,700	78	451	25	207
Texas Inland	5,000	6,588	7	104	7	297
Texas Gulf	21,200	14,700	5	1,157	19	185
Louisiana Gulf	9,600	17,666	14	172	1	88
Ark. & La. Inland	200	12,500	51	37	7	44
Rocky Mountain	6,200	7,588	167	95	2	41
California	200	25,800	336	248	86	81
Total	135,200	350,660	982	4,349	188	1,303

*Includes 71,000 bbls. run through pipe lines.

CRACKED OPERATIONS

Fresh cracking stock charged to stills: crude, 5,120,000 bbls; other oils, 18,373,000 bbls.
Gasoline produced by cracking, 17,580,000 bbls.
Fuel oil produced by cracking, 15,732,000 bbls.

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

	June, 1935 Total	June, 1935 Daily av.	May, 1935 Total	May, 1935 Daily av.	Jan.-June, 1935	Jan.-June, 1934
Appalachian:						
Pennsylvania Grade	2,066	68.9	2,257	72.8	12,757	11,700
Other (inc. Kentucky)	555	18.5	608	19.6	3,431	3,019
Lima-N.E. Ind.-Mich.	1,315	43.8	1,319	42.5	7,224	5,812
Ill.-S.W. Ind.	422	14.1	448	14.5	2,446	2,707
Mid-Continent:						
N. La. and Ark.	1,621	54.1	1,699	54.8	9,680	10,200
W. Texas-S.E. N. Mex.	6,148	205.0	6,255	201.8	36,726	32,188
East Texas	15,144	504.8	14,954	482.4	87,613	91,399
Other (Okla., Kans., N. Tex., etc.)	28,068	935.6	29,255	943.7	166,726	158,431
Gulf Coast	8,551	285.0	8,619	278.1	48,864	38,463
Rocky Mountain	1,735	57.8	1,694	54.7	9,572	8,248
California	16,709	557.0	15,342	494.9	91,126	86,478
Other*	4	.....	4	.....	20	5
Total	82,338	2,744.6	82,454	2,659.8	476,185	448,680

*Includes Missouri, Tennessee, and Utah.

MOVEMENT OF CRUDE OIL AND REFINED PRODUCTS TO EASTERN PORTS IN THE UNITED STATES

(Thousands of barrels of 42 gallons)

	June 1935	May 1935	June 1934	Jan.-June 1935	Jan.-June 1934
California to East Coast:					
Gasoline	769	698	872	3,897	3,728
Kerosene	5	76	79	824	841
Gas oil and fuel oil	.....	.....	1,118	564	9,329
Lubricants	13	6	9	43	33
Miscellaneous	74	77	16	303	119
Total	861	857	2,094	5,631	14,050
Gulf to East Coast:†					
Crude	11,586	11,503	(*)	71,806	(*)
Gasoline‡	6,854	6,895	(*)	37,241	(*)
Kerosene	605	610	(*)	6,819	(*)
Gas oil and fuel oil	2,849	3,913	(*)	26,629	(*)
Lubricants	309	161	(*)	1,080	(*)
Miscellaneous	7	10	(*)	42	(*)
Total	22,210	23,092	(*)	143,617	(*)
Foreign crude to East Coast:					
Colombia	.....	.....	485	.....	2,813
Ecuador	.....	.....	.....	.....	79
Mexico	329	257	660	1,069	2,662
Trinidad	.....	.....	.....	59	.....
Venezuela	2,091	2,144	2,306	10,572	11,284
Total	2,420	2,401	3,451	11,700	16,838
Foreign crude to Gulf Coast:					
Colombia	226	331	...	1,978	...
Mexico	66	76	264	498	797
Venezuela	136	625	72	1,226	250
Total	428	1,032	336	3,702	1,047

* Not available. † From Division of Investigations, Department of the Interior. ‡ Includes natural gasoline.

STOCKS OF CRUDE PETROLEUM BY DISTRICTS AND GRADES

(Thousands of barrels of 42 gallons)

	June 30, 1935	May 31, 1935	June 30, 1934
At refineries by location:			
East Coast: Domestic	11,512	11,672	10,540
Foreign	2,683	2,565	2,857
Appalachian	1,594	1,705	1,599
Indiana, Illinois, Kentucky, Michigan	4,326	4,791	4,458
Oklahoma, Kansas and Missouri	5,426	6,095	6,122
Texas: Inland	1,534	1,669	1,872
Gulf Coast: Domestic	10,673	11,395	10,804
Foreign	548	515	147
Louisiana Gulf Coast: Domestic	4,334	4,388	3,631
Foreign	961	1,040	602
Arkansas and Inland Louisiana	1,082	1,024	711
Rocky Mountain	12,911	13,050	13,182
California	6,939	5,976	8,916
Total	64,523	65,885	65,442
At refineries by origin:			
Pennsylvania Grade	1,416	1,314	1,388
Other Appalachian (inc. Kentucky)	527	646	622
Lima-N.E. Indiana-Michigan	457	398	544
Illinois-S.W. Indiana	193	154	134
North Louisiana and Arkansas	2,669	2,578	2,013
West Texas and S.E. New Mexico	3,508	4,169	4,202
East Texas	7,009	6,966	7,604
Oklahoma, Kansas, North Texas, etc.	16,080	18,082	17,065
Gulf Coast	8,636	8,459	6,198
Rocky Mountain	12,897	13,023	13,149
California	6,939	5,976	8,916
Foreign	4,192	4,120	3,606
Total	64,523	65,885	65,442
Pipe line and tank farm:			
Pennsylvania Grade	3,747	3,746	3,635
Other Appalachian (inc. Kentucky)	512	532	732
Lima-N.E. Indiana-Michigan	897	1,071	1,107
Illinois-S.W. Indiana	11,414	11,404	11,138
North Louisiana and Arkansas	7,904	7,983	8,826
West Texas and S.E. New Mexico	27,081	26,760	25,323
East Texas	24,082	24,819	35,950
Oklahoma, Kansas, North Texas, etc.	130,772	132,278	146,083
Gulf Coast	15,136	14,604	10,592
Rocky Mountain	15,185	15,134	15,129
California	24,444	25,487	24,886
Total	261,174	263,818	283,411
Lease (producers') stocks	9,060	8,856	8,386
Total refinable crude in the United States	334,757	338,559	357,229

GASOLINE PRODUCTION BY THE VARIOUS METHODS, JUNE, 1935

(Thousands of barrels of 42 gallons)

	Straightrun: Total	Straightrun: Per cent (*)	Straightrun: Per cent (†)	Cracked: Total	Cracked: Per cent (*)	Cracked: Per cent (†)	Nat. gasoline: Total	Nat. gasoline: Per cent (†)	Gasoline: Total	Gasoline: Per cent (*)
East Coast	2,536	17.9	42.2	2,309	23.3	56.3	31	0.5	5,876	41.2
Appalachian	860	25.8	52.2	772	23.2	46.9	14	0.9	1,646	49.0
Ind., Ill., etc.	2,680	22.9	39.8	3,901	33.4	58.0	150	2.2	6,731	56.3
Okla., Kans., Mo.	2,642	27.8	50.4	2,209	23.3	42.1	391	7.5	5,242	51.1
Texas Inland	1,666	32.7	60.8	798	15.6	29.1	275	10.1	2,739	48.3
Texas Gulf	2,316	19.8	45.7	2,860	23.1	53.1	88	1.2	7,264	42.9
Louisiana Gulf	767	21.3	58.0	539	15.0	40.8	16	1.2	1,322	36.3
Ark. & La. Inland	321	19.7	52.0	271	16.6	42.9	25	4.1	617	36.3
Rocky Mountain	429	25.2	48.9	408	23.9	46.5	41	4.6	878	49.1
California	2,292	23.1	56.1	1,513	10.6	25.8	1,059	18.1	5,865	33.7
Total	18,510	22.7	48.5	17,580	21.5	46.0	2,090	5.5	38,180	44.2

* Per cent of crude run. † Per cent of total gasoline output.

WILDCAT OPERATIONS

OKLAHOMA WILDCATS

Week Ending August 31

NORTHERN OKLAHOMA

Alfalfa County

Tex-O-Kan Oil Co.'s No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; plugged to 6,296 ft.; fshg. for 900 ft. of drill pipe.

Beckham County

Star Oil Co.'s No. 1 Blair, C NW SE Sec. 32-9-26w.
Rig and tools.

Blaine County

Earl Ingraham et al's No. 1 Masters, SW NW NW Sec. 27-16-11w.
S.D. 1,240 ft.

Caddo County

Denver Prod. & Ref. Co.'s No. 1 Sah-Can, C SE SE Sec. 33-10-10w.
T.D. 8,330 ft.; salt wtr.; P.B. to 8,200 ft. and csg. collapsed; milled through csg. and cmtd. with 3,000 sacks.
H. W. Lee et al's No. 1 Horton, NE cor. Sec. 9-6-13w.
T.D. 40 ft.; waiting on csg.
H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 2-6-13w.
T.D. 2,506 ft.; contract comp.; S.D.
F. A. Turner et al's No. 1 Spain, NE NE SW Sec. 1-5-11w.
Sand 2,972-91 ft.; sandy shale 3,050-3,112 ft.; show gas; T.D. 3,112 ft.; set 3,053 ft. of 7-in. csg.

Cleveland County

Arab Pet. Co.'s No. 1 McKiddy, SE SE NW Sec. 16-7-1.
Drlg. 6,048 ft.
Hall-Briscoe, Inc.'s No. 1 Fant, SW SW NE Sec. 27-10-2w.
Drlg. 6,575 ft.

Coal County

Carter Oil Co. et al's No. 1 Thompson, C S½ NE NW Sec. 34-2-9.
Cored 4,992-5,071 ft.; small show gas and oil staining.

Comanche County

Oscar Jones' No. 1-A Scheets, NE SW Sec. 26-3-10w.
Rigged up.

Garvin County

Charles Carter and W. S. Key, Inc.'s No. 1 Wood, NW SW SE Sec. 5-4-3e.
S.D. 2,405 ft.

Grant County

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
T.D. 6,502 ft.; contract depth; S.D.
Shell Pet. Corp.'s No. 1 Foster, NW SE Sec. 30-27-8w.
Drlg. 3,295 ft.
Wentz Oil Corp. et al's No. 1 Wirtz (Community), SE SE NW Sec. 22-28-4w.
Tonkawa 3,575 ft. (correction); Layton 3,960-4,020 ft.
Yingling et al's No. 1 Allen, SW SE Sec. 36-26-4w.
Rig on ground.

Greer County

H. N. Payne et al's No. 1 Tressell, NW cor. Sec. 1-7-22w.
T.D. 1,785 ft.; U.R. 8-in. csg.; to deepen; cleaning out.

Harmon County

King & Hutchinson's No. 1 Hollis, 315 ft. from N and 315 ft. from W lines of SW Sec. 20-3-25w.
Location.
J. J. Mathis' No. 1 Keith, NE NW SW Sec. 12-5-26w.
Machine on ground.

Hughes County

Caprock Oil Co.'s No. 1 Parks, SW SW SE Sec. 34-7-8.
Drlg. 200 ft.
Freeman et al's No. 1 Kite, NW NW NE Sec. 8-8-10.
Top sand 700 ft.; show oil; S.D.
Earl Sadler's No. 1 Scott, NW cor. Sec. 23-7-9.
T.D. 846 ft.; pulled 10-in. csg.
Texas Co.'s No. 1 Keaton, NW SW Sec. 4-8-10.
Set 5-in. csg. 3,950 ft.; shot 15 qts. 3,-985-4,038 ft.; to treat with acid.

Kay County

J. T. Lindsay's No. 1 Waggoner, NW NW NE Sec. 3-27-1.
Top Mississippi lime 3,885 ft.; ran 6-in. csg.; drlg. 4,052 ft.
Lewis Prod. Co.'s No. 1 Hollenbeck, SE NE SE Sec. 18-27-2.
S.D. for wtr. at 800 ft.
Robinson Drlg. Co.'s No. 1 Hermes, SW SW NW Sec. 6-26-4.
Drlg. sandy shale 2,400 ft.

Kiowa County

Rajah Oil Co.'s No. 3 Stone, C SE NE Sec. 34-7-17w.
Sulphur wtr. 1,390-1,430 ft.; T.D. 1,476 ft.; S.D.

Leflore County

McCraw et al's No. 1 Tidwell, C NW SE Sec. 17-3-22.
Drlg. at 300 ft.

Lincoln County

W. N. Anthony's No. 1 Fruin-Eckman, SE SE SW Sec. 4-16-1e.
Rigging up standard tools; T.D. 5,181 ft.
Chester L. Carlock's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Spudded and S.D.
Chas. Ralph's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Spudded and S.D.
Stanolind O. & G. Co. and Amerada Pet. Corp.'s No. 1 Connelly, SE NE SE Sec. 23-14-2.
Cored 5,145-74 ft.; Simpson dense.
Texas Co.'s No. 1 Niccum, SE SW NW Sec. 28-14-5.
T.D. 4,863 ft. in Wilcox; salt wtr.; P.B. to 3,575 ft.

Logan County

Anderson-Kerr et al's No. 1 Goodrum, NE cor. Sec. 15-15-3w.
Drlg. 4,997 ft.
Anderson-Prichard and Frank Buttram's No. 1 Cavalt, NW SW SE Sec. 22-16-3w.
Drlg. 4,310 ft.
Sinclair Prairie and Slick-Urschel's No. 1 Koatsch, SW cor. Sec. 23-15-3w.
Second Wilcox 6,322-43 ft.; wtr.; P.B. to 6,204 ft. in Simpson; making 50 bbls. oil per day; S.I. for tanks.
Stanolind O. & G. Co., Amerada Pet. Corp. and Eason O. & R. Co.'s No. 1 Gragg, SW SW NE Sec. 20-18-4w.
T.D. 5,890 ft.; 7-in. csg. stuck; fshg.
Texas Co. et al's No. 1 Wood, SW SW NE Sec. 34-15-4w.
Drlg. 5,820 ft.

McIntosh County

Glen Cole et al's No. 1 Woodward, NE SW NE Sec. 2-12n-17e.
Rig on ground.

Major County

Indian Territory Illuminating Oil Co. and Continental Oil Co.'s No. 1 Fairview, 700 ft. from S and 670 ft. from W lines of SE¼ Sec. 32-22-14w.
Top sand 6,857 ft.; show gas at 6,882½ ft.; T.D. 7,451 ft.; P.B. to 6,900 ft. to test sand 6,857-6,917 ft.

Noble County

Atlantic Oil Prod. Co. et al's No. 1 Strom, 640 ft. S and W NE cor. SE¼ Sec. 8-20-1w.
Mississippi 4,895 ft.; Chat 5,065 ft.; Viola 5,165 ft.; drlg. 5,175 ft.

Okfuskee County

Sivils et al's No. 1 Montgomery, NW SW NW Sec. 7-9-9.
Location.
Sunray Oil Co.'s No. 1 Culla, NE SW NE Sec. 13-12-8.
Drlg. 2,350 ft.

Oklahoma County

Gypsy Oil Co. and Indian Territory Illuminating Oil Co.'s No. 1 Salisbury, NW NE NE Sec. 13-14-4w.
Dry and abd. 6,730 ft.
Sinclair Prairie O. & G. Co.'s No. 1 Corbett, NE NW NE Sec. 17-13-3w.
Wilcox sand 6,645-6,706 ft., T.D.; flowed 485 bbls. of oil, 27% wtr., 2% b.s.; cored T.D. 6,733½ ft.; salt wtr. in bottom; P.B. to 6,685 ft.; flowed 135 bbls. salt water and trace of oil in 1 hr.

Osage County

J. A. Freeberg et al's No. 1, NE cor. SE Sec. 1-25-6.
T.D. 1,433 ft.; wtg. for fuel.

Pawnee County

Stanolind O. & G. Co.'s No. 1 Shunatana, NE SW SE Sec. 32-22-3.
T.D. 4,220 ft.; set 7-in. csg.; standardizing.

Pontotoc County

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.
Philip Boyle's No. 1 McCracken, NE NW NW Sec. 31-5-4.
T.D. 2,173 ft.; plugged back to 2,167 ft.; pumped salt wtr. with show of oil.
Charles E. Carter's No. 1 Wood, NW SW SE Sec. 5-4-3.
S.D. 2,405 ft.
Clark & Cowden's No. 1 Reynolds-Wagner, SE NW SE Sec. 17-2-7.
Location.
Continental Oil Co.'s No. 1 McCarty, C SE NW Sec. 12-1-7e.
Woodford 3,373 ft.; drlg. 3,404 ft.
Crabb-Craw Oil Co.'s No. 1-A Breco, SE NE SW Sec. 3-4-6.
Sand 1,106-18 ft.; pumped 10 bbls. in 24 hrs.; S.D.
W. A. Delaney et al's No. 1 Fulsome, SE NE Sec. 35-4-6.
Location.
Franks Bros.' No. 1 Abbott, SW NW NE Sec. 34-3-6.
Rig.
Gillette & Kroeger's No. 1 Duver, NW NW SE Sec. 36-1n-6e.
T.D. 1,325 ft.; S.D.
McBride, Inc., et al's No. 1 Copeland, SE NW Sec. 31-4-5.
U.R. 12-in. csg. to 889 ft.
Southern Oil Co.'s No. 1 Perry, SW SW NW Sec. 11-4-6.
Rig on ground.
Leonard Williams et al's No. 1 Breedon, NW cor. Sec. 6-2-5.
Spudded, rigging up standard tools.

Pottawatomie County

Hoss Oil Co. et al's No. 1 Sparkman, SE NE Sec. 33-8n-4e.
Location.

Seminole County

L. Cooper's No. 1 Chandler, NE SE SW Sec. 4-5-6.
S.D. 1,780 ft.
Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
Sand 520-60 ft.; H.F.W.; S.D. 608 ft.
Scott & Smith's No. 1 Abb, SE NW SE Sec. 4-6-6.
T.D. 2,325 ft.; rigging up rotary tools.
Van Deventer et al's No. 1-A Bender, NE NE SW Sec. 3-8-3.
Sand (corrected) 3,170-3,200 ft.; T.D.; swbd. 60 bbls. oil in 2 hrs.; shot with 3 qts.; cleaning out.
Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
S.D. at 3,030 ft.
Tom Phillips et al's No. 1 Abbott, NE cor. Sec. 33-8-7.

Washita County

L. P. McWhirter's No. 1 fee, SW cor. Sec. 34-8n-19w.
T.D. 1,015 ft.; waiting for csg.

SOUTHERN OKLAHOMA

Atoka County

L. O. Garner et al's No. 1 Garner, C NE NW NE Sec. 27-1n-15 (800-ft. test).
Drlg. 305 ft.
Keaton et al's No. 1-A Roland, NE cor. NW NE NE Sec. 16-3s-10e.
T.D. 850 ft. (corrected); lime at 800-47 ft.; will treat.
Malarnee et al's No. 2 D.O.K. land, C SE SE Sec. 35-2s-13.
T.D. (corrected) 3,136 ft.; cleaning out.
Mid-Continent Pet. Corp. et al's No. 1 Fulton, SW cor. Sec. 19-1s-12e.
Cored 2,927-39 ft.; shale and sandy streaks; T.D.
R. H. Pierce et al's No. 1 Aetna Life Ins. Co., NW SW NE Sec. 10-1n-13e.
S.D. 1,305 ft.
Vierson et al's No. 1 Williams, NE SW NW Sec. 34-2s-10.
S.D. for repairs at 2,236 ft.

Bryan County

Welch Oil Corp.'s No. 1 Collins, NE NE Sec. 19-8s-8e.
S.D. 825 ft.
J. D. Parks' No. 1 Coats, SE NE SW Sec. 1-5s-8e.
T.D. 325 ft.; S.D.
H. B. Smith et al's No. 1 Henry, C NW NE Sec. 10-8s-7e.
Rig (4,500-ft. test).
Trio Oil Co.'s No. 1 Gilbert, SW NE SW Sec. 25-8s-7.
Sand 891-902 ft.; shale at 905 ft.; T.D.; flowing water.

Carter County

Waco Turner's No. 1 Munson, NE NW NE Sec. 35-5s-2w.
S.D. for water, 4,768 ft.
Carter Oil Co.'s No. 1 Carter-Williams, SW NE SW Sec. 27-2s-3w (7,000-ft. test).
Drlg. 7,200 ft.

Choctaw County

Rhodes et al's No. 1 Possumik Savings Bank, SW NW Sec. 1-5s-17.
Fishing tools at 605 ft.

Jackson County

Associated Oil Co.'s No. 1 Harrell, NE NE SE Sec. 12-1s-21w.
Drlg. 980 ft.
Dengail Oil & Gas Co.'s No. 1 Robinson, SE SE NE Sec. 32-1s-22w.
Drlg. 4,490 ft. in shale and broken lime.
Gypsy Oil Co.'s No. 1 Boucher, NW SW SW Sec. 32-1-19w.
Set 6⅝-in. csg. 2,340 ft.
Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,722 ft.; S.D.
Marshall & Burnham's No. 1 Hess, NE SW NE Sec. 27-1s-20w.
Drlg. 1,492 ft. in shale.
Palo Duro Oil Co.'s No. 1 Ealum, SW SW SW Sec. 16-2-21w.
S.D. 2,505 ft.
Triangle Oil Co.'s No. 1 Fox, E½ W½ NW Sec. 11-3n-20w.
S.D. 632 ft.

Jefferson County

Gypsy Oil Co.'s No. 1 James, SW SE SE Sec. 30-5s-6w.
S.D. 2,102 ft.
G. W. Howell et al's No. 1 Currey, SE SE SW Sec. 36-4s-9w.
Drlg. 2,194 ft. in chert.

Johnston County

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Drlg. 2,100 ft.
Equitable O. & G. Co.'s No. 1 Bellsey, NE SW Sec. 12-2s-4e.
Location.

Love County

Sinclair Prairie Oil Co.'s No. 1 Stockton, SE SE SW Sec. 26-6s-2w (5,000-ft. test).
Lime 3,250-70 ft.; drlg. 4,090 ft., in shale.
Schermerhorn Oil Co.'s No. 1 Rich, SW SE SE Sec. 35-4s-4e.
Tulip sand 1,052-53 ft., T.D.; sulphur water; abandoned.

Marshall County

Jess Cook et al's No. 1 May, NE NW Sec. 12-8s-5.
Drlg. 75 ft.
Norman Smith's No. 1 Chestnut, NE cor. Sec. 23-8s-5e.
S.D. 275 ft.; machine moved out.
Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
Top Sylvan shale 5,405 ft.; T.D. 5,461 ft.; S.D.

Murray County

Equitable O. & G. Co.'s No. 1 Ferguson, NE NE SW Sec. 36-1s-3.
Oil Creek sand 1,910-2,092 ft.; flowing fresh water.

Pushmataha County

C. W. Whitehead et al's No. 1 Misser, SE SW SW Sec. 35-3s-18e.
6-in. csg. at 3,360 ft.; S.D. 3,385 ft.

Stephens County

Geo. Pace et al's No. 1-A Damron, SE SE SW Sec. 25-2s-6w.
Dry and abd. 1,910 ft.
Prince Bros.' No. 1-A Williams, C SW SE Sec. 19-2-8w.
R.U. and S.D.

Tillman County

J. B. Connelly's No. 1 McCord, NW SE NE Sec. 15-1-17w.
Drlg. 410 ft.
Loper et al's No. 1 Conrad, NE cor. Sec. 35-1s-19w.
Drlg. in brown shale 1,660 ft.

KANSAS WILDCATS

Week Ending August 31

(Descriptions are East unless marked otherwise)

Barber County

Southern Drlg. Co. et al's No. 1 Davis, 330 ft. from W and 330 ft. from S line of NE Sec. 12-34-15w.
Viola 5,215 ft.; at 5,275 ft., 1,000,000-ft. gas show and spray of oil; acidized; 400 ft. fluid in hole; T.D. 5,304 ft.; P.B. 5,260 ft. and acidized; show of oil and gas; cleaning out.
L. H. Wentz' No. 1 Skinner, SE NW NW NE Sec. 29-31-14w.
Chat 4,538-45 ft., T.D.; 400 ft. oil in hole; U.R. 6-in. csg.

Barton County

Continental Oil Co.'s No. 1 Klug, C N half N half NE Sec. 18-17-12w.
S.D. 859 ft.
Lario O. & G. Co. et al's No. 1 Peter, NW cor. Sec. 24-20-11w.
Drlg. 1,995 ft.
Palmer Oil Corp.'s No. 1 Morris, SE NW NE Sec. 6-19-15w.
Drlg. 3,604 ft.
C. L. Price et al's No. 1 Ehrlich, NW NW SE Sec. 10-16-13w.
Oswald 3,098 ft.; S.D. 3,140 ft.
Suppes & Witt's No. 1 Hayes, NW cor. Sec. 7-16-15w.
Drlg. 3,150 ft.
Torry & Feaster et al's No. 1 Kimpler, SE NE NE Sec. 31-18-11w.
Drlg. 1,700 ft.
Torry & Feaster's No. 1 Feist, NE NE SE Sec. 29-18-11w.
S.D. 2,215 ft.
W. E. Witt's No. 1 Murray, NW SW Sec. 14-17-14w.
Rig.

Butler County

Mohawk Oil Co.'s No. 1 Overstreet, NW cor. (Lot 21), Sec. 19-26-8.
S.D. 555 ft.

Western Kansas O. & R. Co.'s No. 1 King & Marshall, NW NW SW Sec. 11-28-6.
Top Mississippi lime 2,733 ft.; at 2,804-05 ft. est. 10 bbls. oil per day; S.D. at 2,827 ft.

Clark County

Watchorn Pet. Co.'s No. 1 Stevens, NW NE NW Sec. 21-32-21w (old T.D. 4,290 ft.).
Cleaning out to deepen; abandoned.

Cowley County

Baden, Johnson, Roth & Faurot's No. 1 David, NE SW Sec. 35-30-4.
Sand 2,953-75 ft.; swabbed and flowed 55 bbls. oil in 12 hrs.; shot 40 qts.; swbd. 105 bbls. oil in 8 hrs.; cleaning out.

Murfin & Stewart's No. 1 Newton, SE SE SE Sec. 21-30-2.
Rig.

Wakefield et al's No. 1 Auman, SE SE NE Sec. 32-33-3.
Drlg. 2,680 ft.

Winkler, Koch et al's No. 1-B Harlan, C NW NE Sec. 13-31-7.
Rigging up.

Dickinson County

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Hunton 2,808 ft.; H.F.W. 2,812 ft.; drlg. 3,148 ft.

Ellis County

Ellis County Oil Co.'s No. 1 Freis, near C SE SE NW Sec. 10-12-20w.
Moving in material.

Helmerich & Payne et al's No. 1 Kuhn, C NE quarter Sec. 16-14-20w.
S.D. 3,818 ft.

Palmer and Storm King Oil Co.'s No. 1 Bowlby, NE NW NW Sec. 13-11-16w.
Drlg. 490 ft.

Tom Palmer and Storm King Oil Co.'s No. 1 Ruder, SE SE NW Sec. 17-15-18w.
Acidized; pumped 818 bbls. in 24 hrs.; completed; T.D. 3,440 ft.

P. G. Reynolds et al's No. 1 Walter, SE NE SW Sec. 2-12-18w.
Moving in material.

L. Roark et al's No. 1 Bemis, SE cor. Sec. 16-11-17w.
Drlg. 2,292 ft.

Ellsworth County

Franco Central et al's No. 1 Frevert, SW cor. Sec. 8-17-10w.
K. C. lime 3,019 ft.; show oil 3,040-41 ft., Drlg. 3,067 ft.

Keith et al's No. 1 Schepman, SW SW NW Sec. 22-17-10w.
Rigged up.

Lario O. & G. Co.'s No. 1 State, SW SW SW Sec. 29-15s-8w.
T.D. 2,937 ft.; P.B. 2,525 ft.; S.D.

Graham County

Cusco Oil Co.'s No. 1 Kaufman, C NE NE Sec. 18-6-24w.
Rotary rig.

Helmerich & Payne et al's No. 1 Stites, C SW SW Sec. 8-10-22w.
S.D. 4,220 ft.; moving in spudder.

Vickers Pet. Co. & Phillips Pet. Co.'s No. 1 Hutton, 430 ft. W and 330 ft. S of NE SE Sec. 29-8-22w.
Rigging up.

Harper County

Kessler, Thier et al's No. 1 Wolfje, SW SW NE Sec. 17-32-6w.
Siliceous 5,011 ft.; T.D. 5,078 ft.; dry and abd.

Harvey County

Goering Bros.' No. 1 Brainard, NE SW Sec. 3-22-2w.
K.C. lime at 2,387 ft.; U.R. 8-in. csg. 2,997 ft.; T.D.

Hartman & Blair et al's No. 1 Redinger, NW cor. Sec. 15-24-2w.
Fishing 2,045 ft.

Kingman County

Derby et al's No. 1 Bartholomew, SW NW NW Sec. 8-27-4w.
Drlg. 4,035 ft.

Logan County

Alma Pet. Co. and McNeely's No. 1 Watchorn, C SW NE Sec. 12-15-32w.
Rotary rig.

McPherson County

Carey & Miller's No. 1 Husband, SE SE NW Sec. 6-19-3w.
K.C. lime 2,460 ft.; drlg. 2,660 ft.

Hollow, Toews & Hinkle's No. 1 Aschman, NW NW SE Sec. 8-21-4w.
K.C. lime 2,700 ft.; U.R. 8-in. csg. to 2,335 ft.

L. H. Wentz' No. 1 Holdeman, NW SE Sec. 16-18-1w.
Rigging up.

Osage County

Jim Edwards' No. 1 Detrick, C NW SE Sec. 21-14-15.
Show oil and gas 782-800 ft.; T.D. 800 ft.; shut down 5-8-35.

Pratt County

Skelly Oil Co. et al's No. 1 Comm. Gilchrist, C SE¼ Sec. 7-28-11w.
Cellar.

Reno County

Allison & Fitzwilliams' No. 1 Dukelow, NE NE NE Sec. 11-22-6w.
Drlg. 2,338 ft.

Haynes Bros.' No. 1 Mueller, SE SE NW Sec. 30-24-4w.
Hunton 3,690-2,701 ft.; hole full fluid, mostly wtr.; pulled 5-in. csg. and P.B. to 3,400 ft.

McPherson Drlg. Co. et al's No. 1 Miller, NE NW Sec. 34-24-5w.
Rigging up rotary.

Shell Pet. Corp.'s No. 1 Reese, center W½ W½ SW¼ Sec. 11-26-9w.
Coring 3,464 ft.

Stanolind & Amerada's No. 1 J. J. Hilger, A. NE NE SW Sec. 21-26-4w.
Chat 3,648 ft.; drlg. 3,652 ft.

Rice County

Aylward et al's No. 1 Haas, NE NW NE Sec. 4-19-10w.
Rigged up.

Aylward et al's No. 1 Rickard, SW SW NW Sec. 22-18-9w.
Drlg. 2,660 ft.

Anderson & Kerr's No. 1 Wernet, NW cor. Sec. 24-20-6w.
Drlg. 2,878 ft.

Continental Oil Co.'s No. 1 Ferguson, SE NW NE Sec. 8-18-7w.
Rigging up rotary.

James Davis' No. 1 Bernstorf, SE cor. Sec. 19-19-10w.
Bldg. rig.

L. E. Douglas and Hutchinson O. & G. Co.'s No. 1 Hammell, NE NE NE Sec. 16-19-10w.
Drlg. 1,905 ft.

J. M. Hurd's No. 1 Wright, NE cor. Sec. 36-21-7w.
Cellar.

Three Rivers Oil Co.'s No. 1 Buehler, NW NW NW Sec. 17-18-8w.
Cleaning out at 3,255 ft.

Rooks County

El Dorado Refining Co.'s No. 1 Marshall, C SE SE Sec. 8-7-17w.
Drlg. 700 ft.

F. A. Gillespie & Sons' No. 1 Low, NE NE NW Sec. 12-6-18w.
Drlg. 750 ft.

Murfin et al's No. 1 Wasthusin, NE NE SE Sec. 19-9-16w.
Drlg. 1,175 ft.

Lario O. & G. Co. et al's No. 1 Fisher, NE cor. Sec. 22-10-18w.
Drlg. 1,290 ft.

Smith & Ash's No. 1 Nelson, NW NW NE Sec. 27-10-16w.
H.F.W. 3,693-95 ft.; S.D. in granite.

Trees Oil Co. and Findeiss' No. 1 Johnson, SW SW SE Sec. 26-10-19w.
Topeka 2,037 ft.; good show oil 2,063-82 ft.

Rush County

E. L. Byers et al's No. 1 Ewing, NW SW SW Sec.
Bldg. rig.

Darby Pet. Co.'s No. 1 Jacobs, SW SW NW Sec. 3-16-19w.
Location.

Gypsy Oil Co.'s No. 1 Kraisinger, SE NE SE Sec. 23-18-17w.
Drlg. 2,919 ft.

Ramsey Pet. Co. et al's No. 1 Darkes, SW SW NW Sec. 5-17-20w.
K.C. lime 3,568 ft.; T.D. 3,711 ft.; drlg. by casing 3,690 ft.

Twin Drlg. Co. et al's No. 1 Appl, SW SW NE Sec. 29-17-17w.
Topeka lime 3,043 ft.; drlg. 3,295 ft.

Russell County

J. Brouk and R. D. Bailey's No. 1 Kleusner, NW NW SE Sec. 34-15-12w.
Showing of oil and water 3,178-90 ft.; drlg. 3,225 ft.

Coralena Oil Co.'s No. 1 Berrick, NE NW NE Sec. 6-16-13w.
Rigging up.

Coralena Oil Co.'s No. 1 Fiegler, SE SE NE Sec. 11-15-14w.
Underreaming at 2,972 ft.; showing of oil 2,990-3,000 ft.

Hartman & Blair's No. 1 Claussen, SE NE SW Sec. 34-12-14w.
Drlg. 925 ft.

Hartman & Blair's No. 1 Mills, SE SE SW Sec. 27-12-15w.
Drlg. 2,930 ft.

Murfin et al's No. 1 Gorham estate, NE NE SE Sec. 29-14-15w.
Moving in material.

Nassau Oil Corp.'s No. 1 Karst, NW SW NE Sec. 27-15-14w.
U.R. 8-in. csg. at 2,565 ft.

Pryor and Lockhart's No. 1 Spicer, NE NE SE Sec. 21-11-15w.
Oswald 2,997 ft.; showing of oil and water 3,219-25 ft.
Drlg. 3,212 ft.

Roth & Faurot's No. 1 Shaffer, C NW NE Sec. 31-13-12w.
Underreaming 2,500 ft.

Stearns & Streeter's No. 1 Dreiling, SW SW SW Sec. 8-13-15w.
Drlg. 2,794 ft.

Sedgwick County

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
Drlg. 2,910 ft.

Dickey Oil Co. et al's No. 1 Chase, SE cor. Sec. 11-27-2.
U.R. 8-in. csg. to 2,851 ft.

Stafford County

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Cornwall, C NE SW Sec. 4-25-12w.
Drlg. 2,980 ft.

Rose-Spring Drlg. Co.'s No. 1 Toland, NW NW SW Sec. 2-25-14w.
Drlg. 2,434 ft.

Sedgwick Oil Co.'s No. 1 Ellinwood Hunting Club, SE SW SW Sec. 32-21-11w.
Drlg. 1,790 ft.

Sumner County

Allison & Fitzwilliams et al's No. 1-B Hitchcock, SW SW NE Sec. 16-30-1w.
Fishing at 3,812 ft.

D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW Sec. 15-35-1w.
T.D. 1,706 ft.

Winkler & Koch et al's No. 1 Beisley, SW SW NW Sec. 2-32-2w.
S.D. 2,900 ft.

Trego County

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.
Fishing at 1,600 ft.

Hansa & Lauck and Olson Drlg. Co.'s No. 1 Lang, SE SE NW Sec. 1-14-21w.
Fishing 3,645 ft.

Vickers et al's No. 1 Secor, NW NW NW Sec. 25-15-24w.
K.C. lime 3,635 ft.; set 7-in. 3,650 ft.; drlg. cement.

Woodson County

Saco Oil Co.'s No. 1- Hassenpflug, SW NW NE Sec. 34-25-14.
Drlg. 930 ft.

Chas. Sheedy's No. 1 Snattinger, C E½ NE NE Sec. 3-26-14.
Drlg. 900 ft.

GULF COAST WILDCATS

Week Ending August 31

Raccoon Bend—Austin County

Humble O. & R. Co.'s No. 16-X Paine, 933 ft. southeasterly from Robert G. Paine's No. 13-X, 500 ft. at R/A southwest from NE line, Wm. C. White Sur.
Drlg. shale and boulders 1,047 ft.

Humble O. & R. Co.'s No. 5-X Reese, 150 ft. SW of Wm. Smeathers League line, 223 ft. NW of SE property line, 223 ft. SE of NW property line, Wm. C. White Sur.
T.D. 4,150 ft.; 7-in. csg. 4,038 ft.; I.P. 42 bbls. per hr. through ½-in. choke.

Humble O. & R. Co.'s No. 3 H. F. Granen, 682 ft. NE of No. 1, 150 ft. SE of NW¼ of 63.8-ac. tract, Smeathers Sur.
Location.

Humble O. & R. Co.'s No. 7-X McCasland, 190 ft. NW line, 168 ft. SE line of Smeathers & White Sur.
Location.

Danbury—Brazoria County

Turnbull & Irwin's No. 1 Blakely, Sec. 14, H.T.&B. Sur.
T.D. 6,691 ft.; to make D.S.T. in sand showing oil from 6,654-87 ft.; tested 45 lbs. pressure and 125 ft. of mud; drilled to 6,910 ft.; abd.

Hastings—Brazoria County

Humble O. & R. Co.'s No. 1 G. C. Cannon, 330 ft. N, 330 ft. W from SE cor. of 60-ac. lease, H.T.&B. Sur., Sec. 36.
Derrick.

Humble O. & R. Co.'s No. 1 J. F. Bridges, center of N 10 acres of 20-ac. lease, A.C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co.'s No. 2 J. F. Bridges, center of S 10 acres of 20-ac. lease, A.C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co.'s No. 1 J. C. Johnson, center of 10-ac. lease, A.C.H.&B. Sur. No. 2.
Top sand 5,920 ft.; T.D. 6,074 ft.; 7-in. csg. 5,984 ft.

Stanolind O. & G. Co.'s No. 2 Guido, 330 ft. N, 1,650 ft. W from SE cor. of 40-ac. lease, H.T.&B. Sur. No. 36.
Rig up.

Stanolind O. & G. Co.'s No. 2 Drake, 330 ft. N, 1,650 ft. W from SE cor. of 120-ac. lease, H.T.&B. Sur. No. 36.
Derrick.

Stanolind O. & G. Co.'s No. 2 Pennock, 330 ft. N, 1,650 ft. W from SE cor. of 40-ac. lease, H.T.&B. Sur. No. 36.
Derrick.

Stanolind O. & G. Co.'s No. 2 Wooster, 119 ft. from N line, 356 ft. from most easterly W line of 70.8-ac. tract.
T.D. 6,120 ft.; running 7-in. csg.

Stanolind O. & G. Co.'s No. 2 W. H. Avitts, 330 ft. from E line, 119 ft. from S line, 765 ft. S of No. 1, A.C.H.&B. Sur. No. 1.
Top sand 6,080 ft.; T.D. 6,100 ft.; 7-in. csg. 6,080 ft.

Stanolind O. & G. Co.'s No. 3 Grote, 608 ft. N, 764 ft. W of SE cor. of 71.6-ac. tract, A.C.H.&B. Sur. No. 2.
Set 16-in. csg. at 105 ft.; drlg. shale and lime shells 2,142 ft.

Stanolind O. & G. Co.'s No. 3 W. B. Wooster, 330 ft. NW of road, 330 ft. from S line of A.C.H.&B. Sur. No. 1.
T.D. 6,100 ft.; running 7-in. csg.

Stanolind Oil & Gas Co.'s No. 1-A, W. H. Avitts, 330 ft. S, 330 ft. W of NE cor. of 45.85-ac. "A" lease, A.C.H.&B. Sur. No. 1.
T.D. 6,100 ft.; 7-in. csg. 6,065 ft.

Stanolind Oil & Gas Co.'s No. 2 Williams, 330 ft. S, 330 ft. E of the most NW cor. of the Williams 81.13-ac. tract, A.C.H. &B. Sur. No. 1.
T.D. 6,100 ft.; 7-in. csg. 6,055 ft.; I.P. 151 bbls. in 9 hrs. through ¼-in. choke; T.P. 775 lbs.; C.P. 750 lbs.

Stanolind Oil & Gas Co.'s No. 1 Frank Guido, 330 ft. N, 990 ft. W of SE cor. of Guido 40-ac. tract, H.T.&B. Sur. No. 36.
Set 7-in. csg. at 5,850 ft.; T.D. 6,100 ft.; testing.

Stanolind Oil & Gas Co.'s No. 1 Fannie Drake, 330 ft. N, 990 ft. W of SW corner of 120-ac. tract, H.T.&B. Sur. No. 36.
Set 7-in. csg. 5,887 ft.; T.D. 6,100 ft.; I.P. 118 bbls. in 6 hrs. through ¼-in. choke; T.P. 800 lbs.; C.P. 775 lbs.; W.O.C.

Stanolind Oil & Gas Co.'s No. 1 Pennock Estate, 330 ft. N, 990 ft. W of SE cor. of 40-ac. tract, H.T.&B. Sur. No. 36.
Set 7-in. csg. at 5,884 ft.; T.D. 6,100 ft.; I.P. 75 bbls. in 3½ hrs. through ¼-in. choke; T.P. 800 lbs.; C.P. 800 lbs.

Stanolind Oil & Gas Co.'s No. 1 Laur D. Shaw, 330 ft. S, 330 ft. W of most easterly NE cor. of 120-ac. tract, H.T.&B. Sur. No. 36.
7-in. csg. 5,981 ft.; I.P. 37 bbls. in 2½ hrs. through ¼-in. choke.

Stanolind O. & G. Co.'s No. 4 Sneed, 330 ft. S, 330 ft. W of NE cor. of Lot 12, D. M. Jay Subd., on Sneed 226-ac. tract, A.C. H.&B. Sur. No. 2.
T.D. 7,970 ft.; fishing for drill pipe.

Manvel—Brazoria County

Bowles and Barsodi's No. 5 B. E. Norvell Investment Co., 274.5 ft. from S line, 440 ft. from E line of Lot 45, Sec. 23, H.T. &B. Sur.
Location.

Jay Simmons' No. 1 Wilson, center of Lot 25, H.T.&B. Sur. No. 23.
Location.

J. Simmons et al's No. 1 Martens, 31 ft. WE line center of North and South lines, Lot 10.
S.D. 1,120 ft.

J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 318, H.N. Little Sur.
Derrick.

Texas Co.'s No. 1 C. P. Dawson, 274.5 ft. S, 441 ft. W of NE cor. of Lot 59, H.T. &B. Sur. No. 23.
T.D. 5,645 ft.; 7-in. csg. 5,627 ft.; R.U. to drill plug.

Texas Co.'s No. 18 Houston Oil Field Association, 330 ft. S, 330 ft. W from NE cor. Lot 24, A.C.H.&B. Sur., Sec. 91.
Rig up.

Texas Co.'s No. 1 Smith, 330 ft. W of E line, 247.5 ft. N of S line of Lot 17, H.T.&B. Sur. No. 23.
Drlg. gumbo 1,130 ft.

Texas Co.'s No. 6-H H. J. Wray, 1,650 ft. S, 42 degrees W, and 330 ft. S, 48 degrees 22 ft. E from NE cor. of Lot 20, T. Spraggins Sur.
Drlg. shale 5,121 ft.

Texas Co.'s No. 6 Houston Oil Field Asso., 247.5 ft. S, 400 ft. W of NE cor. of Lot 25, A.C.H.&B. Sur., Sec. 91.
Waiting on pumping unit.

Texas Co.'s No. 2 O. W. Halligan, center of Lot 26, H.T.&B. Sur. No. 23.
T.D. 4,032 ft.; 7-in. 4,018 ft.

Texas Co.'s No. 16 Houston Oil Fields Assn., 247 ft. S, 440 ft. E from NW cor. of Lot 19, A.C.H.&B. Sur. No. 91.
T.D. 5,733 ft.; set 7-in. csg. at 5,712 ft.; I.P. 310 bbls. through ¼-in. choke.

Texas Co.'s No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Trumba Oil Co.'s (J. M. Campbell) No. 1 H. McCauley, 150 ft. each way out of NE cor. of W 5 acres of Lot No. 2, A.C.H.&B. Sur. No. 91.
Location.

Turman Oil Co.'s No. 2 Hart, 40 ft. N, 50 ft. W of No. 1.
T.D. 4,020 ft.; abd.

Turman Oil Co.'s No. 3 Hart, 150 ft. E of W line, 433 ft. S of N line of Lot 8.
Location.

Uscan Oil Co.'s No. 1 France, H.T.&B. Sur. No. 23, 150 ft. W of E line, 490 ft. S of N line, Lot 9.
S.W. sand; T.D. 5,745 ft.; S.D.

Old Ocean—Brazoria County

Harrison & Abercrombie's No. 2 Bernard River, 1,000 ft. N, 54 deg. W, 400 ft. S. 36 deg. W of No. 1, Charles Breen Sur.
Fishing at 3,700 ft.

Port Lavaca—Calhoun County

Crown Central Oil Co.'s No. 1 Wilson, 600 ft. NW line, in center of tract, A. Esparza Sur.
Cmtd. surface csg. at 1,300 ft.; W.O.C.

Halliburton Oil Co.'s No. 4 Bruton, M. Sanches Sur.
Spudded.

Steinberger Pet. Co.'s No. 1 Hartman, 466 ft. out of SE cor. of tract, M. Sanches Sur.
Rig up.

Steinberger Pet. Co.'s No. 2 Shofner, 466 ft. out of SW cor. of 100-ac. lease.
T.D. 6,242 ft.; top oil sand 6,216 ft.; 7-in. csg. at 6,216 ft.; I.P. 650 bbls. per day through ¼-in. choke; T.P. 1,400 lbs.; C.P. 1,600 lbs.

Tulane Gordon's No. 1 W. A. Shofner, 339.5 ft. from N line, 295 ft. from E line of block, D. Tilley Addn., M. Sanches Sur.
Location.

Anahuac—Chambers County

Gulf Prod. Co.'s No. 1 Knowles, 2,154 ft. SN line, 467 ft. EW line, Sec. 48, H.&T.C. Sur.
Drlg. shale 2,902 ft.

Humble O. & R. Co.'s No. 3 Clark, 1,403 ft. E of most easterly W line, 2,604 ft. W of No. 1, 466 ft. N of S line, H.&T.C. Sur.
T.D. 7,243 ft.; S.W. sand; top sand 7,212 ft.; abd.

Humble Oil Co.'s No. 1-B Meddleton, 466 ft. out of SE cor. of Sec. 56, H.&T.C. Sur.
T.D. 7,100 ft.; top sand 7,090 ft.; 7-in. csg. 7,084 ft.

Humble Oil & Refg. Co.'s No. 5 Meddleton, 464 ft. W of E line, 1,339 ft. S of N line of Sec. 58, H.&T.C. Sur.
Rig up.

Humble O. & R. Co. and Rycade Oil Co.'s No. 1 Engels, 466 ft. out of SE cor. of Sec. 50, H.&T.C. Sur.
T.D. 7,085 ft.; 7-in. csg. 7,041 ft.; I.P. 31 bbls. per hr. through ¼-in. choke; T.P. 1,150 lbs.; C.P. 1,200 lbs.

Humble O. & R. Co.'s No. 2 Broussard, 2,332 ft. E of W line, 2,332 ft. N of S line of Sec. 63, H.&T.C. Sur. Location.

Johnson & Anderson's No. 1 J. T. White, 466 ft. from S and E lines of N 400 acres of James McGahey Sur. Moving in material.

Mason & McCarthy's No. 2 White, 932 ft. W of No. 1, 466 ft. N of S line of James McGahey Sur. S.D. 756 ft.

Sun Oil Co.'s No. 2 White, 467 ft. SN line, 932 ft. W of No. 1, James McGahey Sur. Derrick.

Sun Oil Co.'s No. 1 White, 466 ft. out of NE cor., 466 ft. W of E line, 2,288 ft. S of N line of James McGahey Sur. T.D. 7,075 ft.; 7-in. csg. 7,030 ft.

Woodley Pet. Co.'s No. 1 Blanke, 330 ft. NS line, 990 ft. EW line, Sec. 41, H.& T.C. Sur. Rig up.

Barbers Hill—Chambers County

Sun Oil Co.'s No. 7 Higgins, 50 ft. S of N line, 50 ft. W of E line. T.D. 5,090 ft.; 7-in. csg. 5,037 ft.; W.O.C.

Sun Oil Co.'s No. 11 Chambers County, half way between and in line with Nos. 9 and 10. T.D 5,464 ft.; 7-in. csg. at 5,421 ft.; testing; I.P. 472 bbls. per day through ¼-in. choke; 675 lbs. pressure.

Big Creek—Fort Bend

Trans State Oil Co.'s No. 1 B. J. Wheat, 108 ft. N of S cor. of J. F. Ahlers lease and 88 ft. E at right angles, W. Young Sur. T.D. 3,698 ft.; prepare to drill plug.

Boling—Fort Bend County

S. A. Brewster's No. 2 H. R. Farmer, James Scott Sur. T.D. 3,882 ft.; P.B. 3,750 ft.; swabbed salt wtr. and S.D.

Sun Oil Co.'s No. 2 H. R. Farmer, 70 ft. SW line, 187 ft. NW line of 100-ac. tract, J. Scott Sur. T.D. 3,899 ft.; 7⅝-in. csg. 3,880 ft.

Texas Co.'s No. 13 Anne Taylor, 150 ft. N at R/A of 10-ac. tract, S. F. Austin League. Drlg. shale 2,765 ft.

Orchard—Fort Bend County

Gulf Prod. Co.'s No. 44 Moore, 500 ft. NW of No. 42, Leo Burknapp Sur. Drlg. rock 1,942 ft.

Gulf Prod. Co.'s No. 43 Moore, 350 ft. E along S line of SW cor. of E.M.&G. Co. Sur. and 740 ft. N at R/A to said line of lease, 350 ft. E of No. 3 Moore. Drlg. sand 6,654 ft.

Thompson—Fort Bend County

Humble O. & R. Co.'s No. 4-B Grubbels, 786 ft. N of No. 3, 650 ft. SN line, 466 ft. WE line, S. Kennedy Sur. T.D. 5,389 ft.; 7-in. csg. 5,285 ft.; swbng.

High Island—Galveston County

Stanolind Oil & Gas Co.'s No. 1-A Viterbo, 5,255 ft. of N line, 81 ft. W of E line of Lot 4, M. Dunman Sur. Drlg. shale and lime 4,016 ft.

Stanolind O. & G. Co.'s No. 3-A Taylor, 62.5 ft. from W line of lease, 164 ft. S of No. 1-A, M. Dunman Sur. Rig up.

Stanolind O. & G. Co.'s No. 4-A Taylor, 62.5 ft. from W line of 15.7-ac. tract, 120 ft. N of No. 1-A M. Dunman Sur. Rig up.

Yount Lee Oil Co.'s No. 1-B Gordon & Viterbo, 62.5 ft. from E line, 50 ft. from S line of Blk. 1, M. Dunman Sur. T.D. 4,659 ft.; comp.; no gauge.

Yount-Lee Oil Co.'s No. 48 Cade, 900 ft. SE and 150 ft. NE of SW corner Block 4, Fitzsimmons Survey. Drlg. shale and lime 3,027 ft.

Yount Lee Oil Co.'s No. 3 Maco-Stewart, 202 ft. S of No. 2 Stewart and 122 ft. W of E line of 7.73 acre tract, D. Dunman Sur. Drlg. sand and lime 4,030 ft.

Yount Lee Oil Co.'s No. 47 Cade, Fitzsimmons Sur. T.D. 4,519 ft.; P.B. 6,479 ft.; showed S.W.; P.B. 6,190 ft.; W.O.C.

Yount Lee Oil Co.'s No. 46 Cade, 424 ft. SW of No. 35, 424 ft. NW of No. 36, Fitzsimmons Sur. T.D. 5,520 ft.; I.P. 1,000,000 ft. of gas per day through ⅝-in. choke; T.P. 1,-025 lbs. shut in.

Dickson—Galveston County

Humble O. & R. Co.'s No. 1 J. F. Magale, 500 ft. SW at right angles to projected center line of road along N line of Block 99, San Leon Farm Home tract, 345 ft. at right angles to E line of Lot No. 1, San Leon Farm Home tracts, 213 ft. from E line of J. C. Magale 346.46-ac. tract, A. Edwards Sur. Drlg. shale 6,381 ft.

Humble Oil & Refg. Co.'s No. 6 Maco Stewart, 6,087 ft. S of NE corner, 1,390 ft. W of E line and 1,390 ft. E of W line and 466 ft. N of S line of Stewart 863-acre lease, J. Sellers Sur. T.D. 8,240 ft.; P.B. 7,426 ft.; drilled into old hole at 7,754 ft.; T.D. 7,980 ft.; prepare to P.B.

Humble O. & R. Co.'s No. 5-A Stewart, 466 ft. W of E line of Stewart "A" Lease, 5,500 ft. due S of No. 2-A Stewart, John Sellers Sur. Rig up.

Humble O. & R. Co.'s No. 1 Bayou Development Co., 375 ft. S of N line and midway between E and W line of Lot No. 7, John Sellers Sur. Drlg. shale 5,758 ft.

Humble O. & R. Co.'s No. 1 E. E. Anderson, 375 ft. N of S line, and midway between E and W lines of Lot No. 4, John Sellers Sur. Drlg. shale 4,483 ft.

Pure Oil Co.'s No. 2 J. W. Shelor, 779 ft. N. 182 ft. W of N. I. Shelar. B.B.B. &C. Sur. T.D. 8,113 ft.; made D.S. test from 8,-094-8,110 ft.; tested oil and S.W.; coring ahead.

Stanolind O. & G. Co.'s No. 2 State, 1,869 ft. E of No. 1 State. Rig up.

Stanolind O. & G. Co.'s No. 1 State, 247 varas S of Humble O. & R. Co.'s No. 1 Jones. T.D. 8,115 ft.; 7-in. csg. 8,113 ft.; perforated csg. with 20 holes from 8,037-54 ft.; I.P. 163 bbls. in 12 hrs. through ¼-in. choke; T.P. 1,500 lbs.; C.P. 1,-575 lbs.

Arriola—Hardin County

Houston Oil Co.'s No. 7-X fee, 660 ft. 20 deg. 30 ft. SE from No. 1-X. T.D. 4,367 ft.; S.D.

Houston Oil Co.'s No. 8 fee, Arriola Sur. T.D. 3,405 ft.; completed for dry gas well.

Batson—Hardin County

John Deering and Batson Oil Co.'s No. 4 Mary Hooks, located halfway between No. 1 and No. 3, W. Donoho Sur. Rig up.

John Deering's No. 1 Conzelman, 2,810 ft. E along N line of NW cor. of H. Numm Sur. and 35 ft. at R/A, W. Donaho Sur. T.D. 6,214 ft.; sand showing oil from 4,113-34 ft.; T.D. of sidetracked hole 4,134 ft.; swbd. S.W.; abd.

John Deering's No. 1 Bullock, 1,000 ft. N, 17 ft. E of middle line of 30-ac. tract, Bullock tract, Dondo Sur. T.D. 6,294 ft.; hole heaved to 4,944 ft.; S.D.

John Deering's No. 3 Cruse, 200 ft. E and 50 ft. S of No. 1 Cruse, W. Donaho Sur. T.D. 5,143 ft.; 7-in. csg. 5,098 ft.; W.O. C.; I.P. 8 bbls. per hr. through ¼-in. choke; T.P. 425 lbs.; C.P. 375 lbs.

Texas Co.'s No. 1 Christian, 100 ft. from W line, 350 ft. from N line of 26.45-ac. tract, W. Donoho Sur. Location.

Pierce Junction—Harris County

J. S. Abercrombie et al's No. 6 Ritter, 125 ft. N of highway, 190 ft. W of No. 5, James Hamilton Sur., Sec. 51. Drlg. shale 1,239 ft.

Gulf Prod. Co.'s No. 11 H. C. Cain, 390 ft. from W line, thence 439 ft. at R/A to N line of 130-ac. tract, Jas. Hamilton Sur. No. 98. Drlg. shale 6,955 ft.

W. H. Holland et al's No. 1, I.&G.N.R.R., 836 ft from S line of Jas. Hamilton Sur. 7-in. csg. 3,970 ft.; tested S.W.; T.D. 3,-984 ft.; testing.

Navarro Oil Co.'s No. 3-A Cain, 75 ft. S line, 50 ft. W line, Jas. Hamilton Sur. T.D. 6,606 ft.; reset screen.

Navarro Oil Co.'s No. 3-B Cain, Jas. Hamilton Sur. Drlg. shale 6,100 ft.

Rio Bravo Oil Co.'s No. 28 Settegast, 1,010 ft. W and 450 ft. N from most southerly SE corner of "B" Lease, J. Kopmen Sur. Drlg. sand and shale 3,741 ft.

Humble—Harris County

Sun Oil Co.'s No. 86 River, 175 ft. from W line, 125 ft. E of No. 85, Robert Dunman Sur. Drlg. heaving shale 1,651 ft.

Sun Oil Co.'s No. 30 Bender, 2,393 ft. N, 3,080 ft. W of most northerly SE cor. of lease; B. Adams Sur. Drlg. shale 4,241 ft.

Mykawa—Harris County

Alpha Pet. Co.'s No. 1 Waggenhausen, C of E½ Lot 10, F. J. Rothas Sur. T.D. 4,681 ft.; P.B. 4,554 ft.; shot pipe and pulled 1,600 ft.; sidetracked at 1,476 ft.; drlg. shale 3,700 ft.

Flannigan Drlg. Co.'s No. 1 Minnetex, 150 ft. out of NE cor. of Blk. 361, Wm. Lovett Sur. Derrick.

Sterling Oil & Refg. Co.'s No. 2 Williams, 250 ft. from N and E line of Wm. Lovett Sur. T.D. 4,659 ft.; running 7-in. csg.; I.P. 50 bbls. per day by heads through ¼-in. choke.

West Prod. Co.'s No. 2 Irwin, W. E. Walker Sur. T.D. 4,240 ft.; I.P. 22 bbls. per hr. through ¼-in. choke; T.P. 400 lbs.

West Prod. Co.'s No. 3 Irwin, 806 ft. WE line, 255 ft. SN line, Rothas Sur. Location.

West Prod. Co.'s No. 1 W. Lang, John R. Hall Sur., Blk. 7. Drlg. shale 7,200 ft.

West Prod. Co.'s No. 3 Platt. T.D. 4,586 ft.; 7-in. csg. 4,527 ft.; W.O.C.

South Houston—Harris County

Stanolind O. & G. Co.'s No. 1 fee, 330 ft. S, 300 ft. E of NW cor. of 20-ac. tract, H.T.&B. Sur. No. 5. Drlg. sandy shale 5,405 ft.

Stanolind O. & G. Co.'s No. 1 First National Bank, 950 ft. from NE line, 890 ft. from SE line of 119.6-ac. tract, Callahan & Vince Sur. T.D. 4,968 ft.; 7-in. csg. 4,671 ft.; I.P. 48 bbls. in 12 hrs. through ½-in. choke.

Stanolind O. & G. Co.'s No. 1 F. J. Burkey, C of Lot 15, Blk. 105, 960 ft. W and 3,570 ft. N of No. 1, H.T.&B. Sur. No. 5. Drlg. shale 1,896 ft.

Stanolind O. & G. Co.'s No. 1 C. E. Gibson, C of Lot 99, Blk. 41, 1,180 ft. W, 1,090 ft. N of No. 1, H.T.&B. Sur. No. 5. Drlg. sandy shale 3,824 ft.

Stanolind O. & G. Co.'s No. 1 Hartow, C Lot 10, Blk. 82, 1,390 ft. E, 660 ft. S of No. 1, H.T.&B. Sur. No. 5. Drlg. shale 2,476 ft.

Stanolind O. & G. Co.'s No. 1 Ed Wells, C Lot 3, Blk. 146, 1,240 ft. E, 2,270 ft. N of No. 1, H.T.&B. Sur. No. 5. Drlg. sandy shale 2,373 ft.

Tomball—Harris County

Amerada Pet.-Stanolind O. & G. Co.'s No. 1 Hilligiest, 550 ft. NS line, 168 ft. WE line of 11-ac. tract, J.House Sur. Derrick.

Humble O. & R. Co.'s No. 3 Hampel, 475 ft. from SN line, 421 ft. from EW line of 109.39-ac. tract, J. M. Hooper Sur. T.D. 5,605 ft.; 7-in. csg. 5,599 ft.

Humble O. & R. Co.'s No. 1 Pate, 342 ft. SE of NW line, 466 ft. SW of NE line, 466 ft. NW of SE line of 20.66-ac. tract, E. Smith Sur. T.D. 5,655 ft.; 7-in. csg. 5,561 ft.; W.O.C.

Humble O. & R. Co.'s No. 9-B Quittio, 1,-391 ft. S of N line, 466 ft. WE line, L. A. Senchal Sur. T.D. 5,554 ft.; 7-in. csg. 5,549 ft.; W.O.C.

Humble O. & R. Co.'s No. 1 Handy, 466 ft. at right angles from E line, 466 ft. at right angles from SE line. T.D. 5,559 ft.; 7-in. csg. at 5,539 ft.; I.P. 4.5 bbls. per hr. through ¼-in. choke; T.P. 1,300 lbs.

Humble O. & R. Co.'s No. 5 Martens, 1,-448 ft. S of N line, 13,625 ft. W of E line, Wm. Hind Sur. Drlg. sand 350 ft.

Humble O. & R. Co.'s No. 1 Tomball townsite, Unit 17, 185 ft. NW of SE line, 405 ft. SW of NE line, C of Lot 5, Blk. 7, Tomball townsite. Drlg. shale 1,881 ft.

Humble O. & R. Co.'s No. 3 Theis, 626 ft. SN line, 553 ft. NW line of 100-ac. tract, Goodrich Sur. T.D. 5,592 ft.; abd.

Vanderbilt—Jackson County

Phillips Pet. Co.'s No. 2 Tuney, 330 ft. each way out of E cor. of 64-ac. tract, or 414 ft. SE of No. 1 R. Musquiz Sur. Abd. 6,017 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co.'s No. 2-A Pipkin & Davis, 1,430 ft. SW of NE cor. of Pipkin & Davis lease along SE line of same and 50 ft. SE at right angles, William McFaddin Sur. Rig up.

Yount Lee Oil Co.'s No. 1-B Pipkin & Davis, 2,225 ft. from E line and 2,385 ft. from N line of survey, Wm. McFadden Sur. Drlg. shale 5,852 ft.

Fannett—Jefferson County

Gulf Prod. Co.'s No. 17 Thomas, 751 ft. W of SE cor., 100 ft. N of SE cor. of E. Thomas 440-ac. tract. Drlg. shale and lime 3,156 ft.

Cleveland—Liberty County

Black Gold Pet. Oil Corp.'s No. 2 R. D. McDonald, 466 ft. W of most westerly E line and 466 ft. N of most northerly S line of survey, 933 ft. W of Gulf Prod. Co.'s No. 7-C Kirby Lbr. Co., T. Devers Sur. Derrick.

Gulf Prod. Co.'s No. 10-C Kirby, 2,245 ft. from W line, 2,363 ft. from S line of John Pleasant Survey. T.D. 5,834 ft.; prepare to test oil sand.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 446 ft. from W line and 170 ft. from S line of survey, Clayton Harper Sur. Location.

Esperson—Liberty County

General Crude's No. 11 Davis, 2,700 ft. WE line, 1,500 ft. NS line, 806-ac. tract, D. Kokernut Sur. Drlg. shale 1,181 ft.

General Crude's No. 1 Heavaty, 467 ft. out of SE cor. of F. M. Gardner Sur. T.D. 6,635 ft.; washing to bottom.

General Crude Oil Co.'s No. 21 Esperson. T.D. 6,944 ft.; cmtd. 9⅝-in. csg. on bottom; perforated csg.; comp. for small gas well.

Hankamer—Liberty County

Eastman-Ward's No. 1 R. E. Lee, 115 ft. from N line of lease and 76 ft. W of west bank of White Bayou, Geo. Stengler Sur. Drlg. sand 520 ft.

Eljean Oil Co.'s No. 1 Thomas, 300 ft. W of E line, 300 ft. SN line, Levi Barrow Sur. Rig up.

Eljean Oil Co.'s No. 2 S. E. Ezell, 130 ft. from N and S line of 10-ac. lease, Levi Barrow Sur. T.D. 3,750 ft.; 7-in. csg. 3,735 ft.; W.O.C.

Gulf Prod. Co.'s No. 23 Boyt. Drlg. shale and lime 2,654 ft.

Gulf Prod. Co.'s No. 1-B W. L. Bingle, 153 ft. E along S line of H.&T.C. Sur., thence 378 ft. Drlg. shale 7,666 ft.

Gulf Prod. Co.'s No. 21 E. W. Boyt, 110 ft. from W line of Amos Allen Sur. Location.

W. C. Hall's No. 1 Ainsworth, 150 ft. out of NE cor. of 50-ac. tract, Andrew Weaver Sur. Rig up.

Sterling O. & R. Co.'s No. 1 George Stengler, 100 ft. out of most westerly NE cor. of Geo. Stengler Sur. T.D. 2,714 ft.; P.B. 2,646 ft.; tested S.W.; abd.

Will Stroxler et al's No. 1 Ezzell, 700 ft. N of S line, 150 ft. W of E line of Levi Barrow Sur. Derrick.

Hull—Liberty County

Gulf Prod. Co.'s No. 109 Phoenix, 2,225 ft. S along W line from NW cor. of 300-ac. lease and 300 ft. E at R/A, J. Devore Sur. Derrick.

Van Vleck—Matagorda County

Skelly Oil Co.'s No. 1 Turner, 523 ft. E from SW cor. of F. Metzler 135-ac. tract, thence 466 ft. S at R/A in Maria Cummins Sur. Drlg. shale 4,125 ft.

Skelly Oil Co.'s No. 3 Cobb "B," 2,750 ft. from NW line, 2,900 ft. from SW line of M. Cummins Sur. Coring shale 8,450 ft.

Conroe—Montgomery County

Humble O. & R. Co.'s No. 76-X South Texas Dev. Co., 1,555 ft. from W line, 1,378 ft. from S line, Theo. Slade Sur. 10¾-in. csg. at 976 ft.; top sand 5,055 ft.; coring sand 5,065 ft.

Sun Oil Co.'s No. 17 Foster. Drlg. shale 3,990 ft.

Sun Oil Co.'s No. 10 Keystone Mills. Derrick.

Sun Oil Co.'s No. 16 Keystone Mills. T.D. 5,105 ft.; set 7-in. csg. at 5,020 ft.; I.P. 794 bbls. per day through ¼-in. choke.

Sun Oil Co.'s No. 19 Foster. T.D. 5,125 ft.; I.P. 285 bbls. per day through ½-in. choke.

Splendora—Montgomery County

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W¼ of Blk. No. 8, Walker County School Land Sur. Derrick.

Orange—Orange County

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur. S.D. 5,035 ft.

Fort Neches—Orange County

Texas Co.'s No. 5-BA (Polk), 897.5 ft. S. 850 ft. W from most westerly NE cor. of "B" Lease. T.D. 5,916 ft.; 7-in. csg. 5,885 ft.; set screen; washing in.

Texas Co.'s No. 5 Stark, 400 ft. from S and 125 ft. from E line of lease, M. E. Hall Sur. T.D. 4,581 ft.; P.B. 3,100 ft.; set whipstock 2,976 ft.; milling out 2,983 ft.

Texas Co.'s No. 4-B Polk, 750 ft. S and 1,450 ft. W from NE cor. of lease, Jacob Beaumont Sur. Location.

Texas Co.'s No. 6-B Polk, 750 ft. S and 250 ft. W from NE cor. of lease, Jacob Beaumont Sur. Location.

Livingston—Polk County

Humble O. & R. Co.'s No. 15 Granbury, 466 ft. from NE and NW lines of Blk. 11, A. Viesca Sur. Bldg. derrick.

Gem Oil Co.'s No. 6 Davis & Holmes, 652 ft. from W and 662 ft. from N line of survey, A. Viesca Sur. Rig up.

Hawkeye Pet. Co.'s No. 4 Howard, 365 ft. from E line of lease, 695 ft. N of No. 1, A. Viesca Sur. T.D. 4,216 ft.; deepened to 4,228 ft.; swabbing.

Humble O. & R. Co.'s No. 13 Granbury, 4,705 ft. SE of NW line, Sec. 10, 466 ft. SW of NE line of Sec. 10, A. Viesca Sur. T.D. 4,230 ft.; top sand 4,222 ft.; 7-in. csg. 4,216 ft.

Humble O. & R. Co.'s No. 12 Granbury, 933 ft. N of No. 9, A. Viesca Sur. Location.

Ownby Drlg. Co. et al's No. 1 Munson, 50 ft. N of the N line of 13-ac. tract, and 150 ft. W of W line of Munson 25-ac. tract, A. Viesca Sur. T.D. 4,301 ft.; set 7-in. csg. 4,772 ft.; I.P. 294 bbls. per day through ¼-in. choke; T.P. 1,150 lbs.; C.P. 1,500 lbs.

Sun Oil Co.'s No. 7 Pratt, 466 ft. from N and W lines of 195-ac. tract, A. Viesca Sur. Drlg. shale 3,520 ft.

Sun Oil Co.'s No. 6 Pratt, 330 ft. from S line of lease, 660 ft. W of No. 2, A. Viesca Sur. Rig up.

Greta—Refugio County

Atlantic-Stanolind O. & G. Co.'s No. 7 A.M.J. T.D. 5,924 ft.; 7-in. csg. 5,924 ft.

Hewett and Daugherty's No. 21 Lambert, Lot 10, J. Connell Sur. Prepare to make drill stem test; T.D. 4,403 ft.

Refugio—Refugio County

Houston Oil Co.'s No. 19 W. J. J. Heard, 660 ft. NE from No. 16. 10-in. csg. 1,068 ft.; W.O.C.

Coleto Creek—Victoria County

American-Liberty Oil Co.'s No. 2 J. Machalee, 330 ft. E of country road, 330 ft. NE of SW line, R. Manchola grant. Spudded.

R. Cox' No. 1 Terrell. S.D. 2,900 ft.

Placedo—Victoria County

Eastern States Pet. Co.'s No. 1 Williams, 330 ft. out of S cor. of 130-ac. tract, E. Benavides Sur. T.D. 4,748 ft.; prepare to drill deeper.

Gillespie & Superior Oil Co.'s No. 2 Randall, offset to No. 1 Janis, Wm. Rupley Sur.
9⅝-in. csg. 4,734 ft.; I.P. 45 bbls. of oil per day through ¼-in. choke; T.P. 1,450 lbs.; C.P. 1,600 lbs.

J. McDowell's No. 1 Kirasek, center Blk. 45, Placedo Townsite.
Location.

C. F. McGrew's No. 1 Hadley, center of 20-ac. lot, S.A.&M.G. Sur., Sec. 9, Blk. 49, Lots 1 and 2.
Location.

Martex Oil Co.'s No. 1 Mitchell, 330 ft. S of W line, 330 ft. N of W line of 500-ac. tract, E. Benavides Sur.
T.D. 6,050 ft.; P.B. 5,332 ft.; tested salt wtr.; S.D.

E. L. Smith's No. 1 Lela, 330 ft. each way out of E cor. Lot 13, Wm. Rupley Sur. Cored oil sand 6,001-11 ft.; tested 3,000 ft. oil on drill stem test; running 5-in. csg.

Sun Oil Co.'s No. 1 Marek, 330 ft. EW line, 330 ft. SN line of NW cor. of 113.5-ac. tract, S.A.&M.G. Sur. No. A-382.
Drlg. shale 4,500 ft.

Clay Creek—Washington County

Pompy et al's No. 1 Klatte, J. F. Perry League, 150 ft. each way out of NW cor. of 50-ac. tract.
Drlg. shale 960 ft.

Sun Oil Co.'s No. 16 Janner, 610 ft. SW of No. 11, 670 ft. NE of No. 6, 150 ft. SE of NW line, Jas. F. Perry Square League.
Coring shale 1,882 ft.

Louise—Wharton County

Pure Oil Co.'s No. 1-B Garrett, 506.47 ft. NE, 429.5 ft. SE from W cor. of Sur No. 27, Morris & Cummings Sur.
Cmtd. surface csg. 534 ft.

Pure Oil Co.'s No. 1 J. H. Roberts, 990 ft. SW and 660 ft. SE of N cor. of 80-ac. tract, Morris & Cummings Sur.
Fishing 5,150 ft.

Pure Oil Co.'s No. 2 Weever, 1,980 ft. SW, 990 ft. NW of E cor. of Sec. 22, J. M. Brownson Sur.
T.D. 5,762 ft.; showed 52 per cent salt wtr. cut and pulled screen; P.B. to 5,146 ft.

Shell Pet. Corp.'s No. 1 A. and E. Steves, 1,400 ft. E and 1,200 ft. S of NW cor. of 1,279.4-ac. lease, J. J. Dillard Sur.
Coring shale 6,684 ft.

Pickett Ridge—Wharton County

Texas Co.'s No. 3-A Pierce, 1,320 ft. N, 38 deg. E from discovery.
T.D. 4,710 ft.; set 7-in. csg. 4,702 ft.; I.P. 16 bbls. per hour through 16/64-in. choke; pressure 500 lbs.

SOUTH LOUISIANA FIELDS

Bayou St. Dennis—Jefferson Parish

Texas Co.'s No. 2 Bayou St. Dennis, 466 ft. N, 1,194 ft. W of SE cor. Sec. 19-17-24.
T.D. 9,633 ft.; oil sand; prepare to make drill stem test.

Texas Co.'s No. 1 Riggolets, 150 ft. W, 230 ft. S of NE cor. Sec. 30-17s-24e.
T.D. 9,586 ft.; 9⅝-in. csg. 9,506 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp.'s No. 25 Watkins, Sec. 18-12s-12w.
Drlg. lime 1,779 ft.

Shell Pet. Corp.'s No. 26 Watkins, 3,380 ft. W, 100 ft. S of NE cor. of Sec. 18-12s-12w.
Location.

Shell Pet. Corp.'s No. 24 Watkins, 2,832 ft. W, 695 ft. S of NW cor. Sec. 19-12-12.
T.D. 3,767 ft.; P.B. 2,450 ft.

Shell Pet. Corp.'s No. 3 State.
T.D. 6,305 ft.; ald. 6,312 ft.

Bay St. Elaine

Texas Co.'s No. 3 School Board, Sec. 16-22s-18e.
Location.

Texas Co.'s No. 10 State, 4,550 ft. E and 4,595 ft. S of NW cor. Sec. 17-22s-18e.
Drlg. wtr. sand 3,497 ft.

Caillous Island—Terrebonne Parish

Texas Co.'s No. 1 State Terrebonne Bay, Sec. 19-23s-20e.
Drlg. wtr. sand 4,082 ft.

Texas Co.'s No. 27 State, Sec. 17-23s-20e.
P.B. 3,225 ft.; prepare to sidetrack.

Tepetate—Acadia Parish

Continental Oil Co.'s No. 1 Henry Klumpp, 660 ft. W, 330 ft. S of NE cor. of Sec. 34, Twp. 7s-2w.
Derrick.

Continental Oil Co.'s No. 1 Homeseekers Dev. Co., 3,300 ft. W, 2,640 ft. N of SE cor. of Sec. 29-7s-2w.
Derrick.

Darrow—Ascension Parish

Humble O. & R. Co.'s No. 3 Gumble, 850 ft. E from center line of R-W along the Rose-Gumble property, 72 ft. NW at R/A Sec. 33-10s-2e.
Drlg. shale 4,742 ft.

Humble O. & R. Co.'s No. 4 Community, 4,825 ft. from NE cor. and 283 ft. S of N line at R/A, Sec. 33-10s-2w.
Digging cellar.

Cameron Meadows—Cameron Parish

Magnolia Pet. Co.'s No. 14 Cameron Meadows, 296 ft. W, 150 ft. S of NE cor. Sec. 21-14s-13w.
Drlg. shale 310 ft.

Burton Sutton Oil Co.'s No. 8 School Land, Sec. 16-14s-13w.
Drlg. sand and gravel 1,420 ft.

Burton Sutton Oil Co.'s No. 4 School Land, Sec. 16-14s-13w.
Derrick.

Choctaw Dome—Iberville Parish

Zeni Oil Co.'s No. 1 Schwing, Sec. 19-17s-24e.
Drlg. shale 1,297 ft.

Dog Lake—Terrebonne Parish

Texas Co.'s No. 11 State, 1,100 ft. N, 2,476 ft. W of SE cor. of Sec. 21-21s-16e.
S.D. 2,914 ft.

Four Isle—Terrebonne Parish

Texas Co.'s No. 6 State, 1,933 ft. S, 2,100 ft. W of NE cor. of Sec. 23-21s-16.
Bldg. derrick.

Texas Co.'s No. 8 La. Land & Expl. Co., 2,177 ft. E, 1,385 ft. S of NW cor. Sec. 24-21s-16e.
Rig up.

Texas Co.'s No. 5 State, 885 ft. S, 2,327 ft. E of NW cor. of Sec. 24-21s-16e.
Location.

Garden Island Bay—Terrebonne Parish

Texas Co.'s No. 16 Garden Island, Sec. 37-23s-33e.
T.D. 4,576 ft.; 7⅝-in. csg. 4,539 ft.; W.O.C.

Texas Co.'s No. 13 State, 3,391 ft. S and 1,604 ft. W of NE cor. Sec. 107-23-32.
Rig up.

Gillis—Calcasieu Parish

Fohs Oil Co.'s No. 1 Airhart, 275 ft. W and S of NE cor. Sec. 14-9-8.
Fishing 7,967 ft.

Fohs Oil Co.'s No. 6 Castle, 300 ft. S, 700 ft. E of NW cor. of SW¼ of SW¼ Sec. 12-9s-8w.
Drlg. shale 4,332 ft.

Texas Co.'s No. 6 Nickerson, 287 ft. N, 289 ft. W of SE cor. of NW¼ Sec. 12-9s-8w.
Derrick.

Union Sulphur Co.'s No. 3 Mayo-Reeves, 1,604 ft. S, 1,041 ft. E of NW cor. of Sec. 12-9s-8w.
T.D. 6,676 ft.; I.P. 14 bbls. per day on 20/64-in. choke.

Union Sulphur Co.'s No. 2 Powell, 2,382 ft. S, 2,901 ft. E of NW cor. Sec. 12-9s-8w.
Location.

Union Sulphur Co.'s No. 7 State, 1,316 ft. N, 199 ft. E of SW cor. Sec. 12-9s-8w.
Location.

Union Sulphur Co.'s No. 8 State, 885 ft. W, 52 ft. N of SE cor. of NE¼ Sec. 1-9s-8w.
Drlg. shale 1,402 ft.

Union Sulphur Co.'s No. 12 State, 2,310 ft. N, 1,850 ft. E of SW cor. of Sec. 12-9s-8w.
Drlg. shale 6,583 ft.

Union Sulphur Co.'s No. 13 State, 1,464 ft. E, 2,088 ft. N of SW cor. of Sec. 12-9s-8w.
Location.

Gueydan—Vermillion Parish

Pure Oil Co.'s No. 6 Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
T.D. 9,545 ft.; prepare to plug back.

Hackberry—Cameron Parish

Calcasieu Oil Co.'s No. 41 Watkins, 2,502 ft. S and 2,544 ft. W of NE cor. Sec. 14-12s-10w.
Drlg. shale 1,340 ft.

Gulf Refg. Co.'s No. 19 Erwin, 1,315 ft. W along S line of the SE cor. of Sec. and 960 ft. at R/A to S line, Sec. 12-12-10w.
Drlg. shale 6,725 ft.

Stanolind O. & G. Co.'s No. 14 Gulf Land, Sec. 14-12s-10w.
Drlg. shale 250 ft.

Stanolind O. & G. Co.'s No. 15 School Land, Sec. 16-12s-10w.
T.D. 7,632 ft.; P.B. 4,900 ft.; rig up to pump.

Texas Co.'s No. 18 State, N 13 deg. 20 ft. W, 4,000 ft. from No. 13, Sec. 44-12s-9w.
Location.

Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w.
T.D. 5,804 ft.; made survey of hole.

Yount Lee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.

New Iberia—Iberia Parish

Canal Oil Co.'s No. 4 Bernard, Sec. 54-12s-7e.
Drlg. shale 4,672 ft.

Harrison & Abercrombie's No. 4 Schwing, Sec. 56-12s-7e.
Drlg. sandy shale 3,785 ft.

Helis' No. 1 Sabatoir, 900 ft. N and 1,210 ft. E of SE cor. of Sec. 53-12s-7e.
Drlg. salt 3,631 ft.; no report.

Texas Co.'s No. 1-B Hansen, 1,418 ft. NE along NW line from most W cor., thence SE at right angle, Sec. 54-12s-7e.
Drlg. shale 2,472 ft.

IOWA—Calcasieu and Jeff Davis Parish

Shell Pet. Corp.'s No. 18 Heyd, 1,068 ft. S, 330 ft. W of NE cor. of NW¼ of Sec. 13.
Drlg. sand and gravel 939 ft.

Jennings—Acadia Parish

Abshire-Boiyard's No. 3 Clemonds, 3,500 ft. N, 95 ft. E of SW cor. Sec. 46.
S.D. 1,925 ft.

Yount Lee Oil Co.'s No. 15 Houssiere-Latriele.
Drlg. anhydrite 4,862 ft.

Lake Hermitage—Plaquemines Parish

Humble O. & R. Co.'s No. 1 State Land, 1,080 ft. E, 200 ft. N of Texas Gulf No. 6, Sec. 11-18s-25e.
Drlg. shale and lime 2,874 ft.

Lake Barre—Terrebonne Parish

Texas Co.'s No. 35 Lake Barre, Sec. 40-21s-19e.
T.D. 4,771 ft.; P.B.; drlg. shale 3,065 ft.

Leesville—Lafourche Parish

Texas Co.'s No. 25 Leesville.
Derrick.

Texas Co.'s No. 22 Leesville, 975 ft. S, 1,975 ft. W of NW cor. of SW¼ Sec. 26-21-22.
Location.

Texas Co.'s No. 32 Leesville, 890 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-21s-22e.
Rig up.

Texas Co.'s No. 33 Leesville, 1,590 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-1s-22e.
Drlg. cap rock 4,300 ft.

Texas Co.'s No. 35 Leesville.
T.D. 3,456 ft.; prepare to test oil sand 3,412-56 ft.

Roanoke—Jefferson Davis Parish

Glassel et al's No. 1-A La. Irrigation Mill Co., Sec. 2-9s-W line.
Drlg. shale and lime 8,006 ft.

Glassel et al's No. 1 La. Irrigation Mill Co., 695.5 ft. E and 475 ft. N of SW cor. Sec. 1-9s-4w.
Location.

Humble Oil & Refg. Co.'s No. 4 Devilbiss, 440 ft. S of N line and 440 ft. W of E line of Sec. 14-9s-4w.
Abd. 9,233 ft.

Humble O. & R. Co.'s No. 2 C. N. Taylor, 1,320 ft. E, 440 ft. S of NW cor. of SW¼ Sec. 12-9s-4w.
Rig up.

Humble O. & R. Co.'s No. 1 Nelson Thomas, 880 ft. W of No. 2 Kratzer, 440 ft. N and W of SE cor. of 200-ac. tract.
T.D. 10,583 ft.; fishing.

Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Coring shale 10,729 ft.

Sweet Lake—Calcasieu Parish

Pure Oil Co.'s No. 13 Gulf Land, 800 ft. S, 66 deg. 42 ft. E of No. 12, Sec. 13-13-13.
Rigging up.

Sulphur—Calcasieu Parish

Union Sulphur Co.'s No. 812 fee.
Drlg. shale 3,859 ft.

White Castle—Iberville Parish

Shell Pet. Corp.'s No. 8 Wilbert.
T.D. 6,009 ft.; prepare to set screen and liner.

Shell Pet. Corp.'s No. 1 White Castle Shingle Co., 1,930 ft. W, 100 ft. S from NE cor. of lease.
T.D. 5,165 ft.; I.P. 596 bbls. per day through 20/64-in. choke; T.P. 345 lbs.; C.P. 465 lbs.

Shell Pet. Corp.'s No. 1 Adams, 2,340 ft. N, 100 ft. E of SW cor. of lease.
T.D. 8,911 ft.; C.O. to bottom.

Miscellaneous Wildcats

TEXAS

Austin County

Deering & Kayser's No. 1 McClinton, 1,100 ft. NW line in center NE and SW of 115.5-ac. tract, Thomas Bell Sur.
Drlg. shale 3,187 ft.

Paul English et al's No. 1 Felix Guhn, 1,000 ft. S, 360 ft. E from NW cor. of 71-ac. tract, D. Chomel Sur., 1 mile SE of Kinney.
Rig up.

R. L. Wheelock et al's No. 1 Nancy Harrigat, 330 ft. each way out of the east cor. of the 78-ac. tract, Benj. Babbitt Sur.
S.D. 3,263 ft.

T. F. Wood et al's No. 1 Trenchman, 330 ft. from SE line of a 50-ac. tract, James Cummins Sur.
S.D. 750 ft.

Brazoria County

Showers & Moncrief's No. 1 Hughey, 5,500 ft. NW of discovery well, in center of Lot 18, H.T.&B. Bur., Sec. 29, Abst. 292.
Location.

Texas Co.'s No. 1 Freeport Sulphur Co., 2,764 ft. N, 1 deg., 40 ft. W and 1,134 ft. S, 88 deg., 20 ft. W of NW cor. of S. F. Austin Bur., Abst. No. 35, being in the Conception Areola Sur.
Sidetracked at 2,929½ ft.; drilled to 3,127 ft.

Chambers County

C. B. Bunte's No. 1 Simon, 1,980 ft. WE line, 990 ft. SN line, Sec. 33, T.&N.O. Sur.
Drlg. shale 2,837 ft.

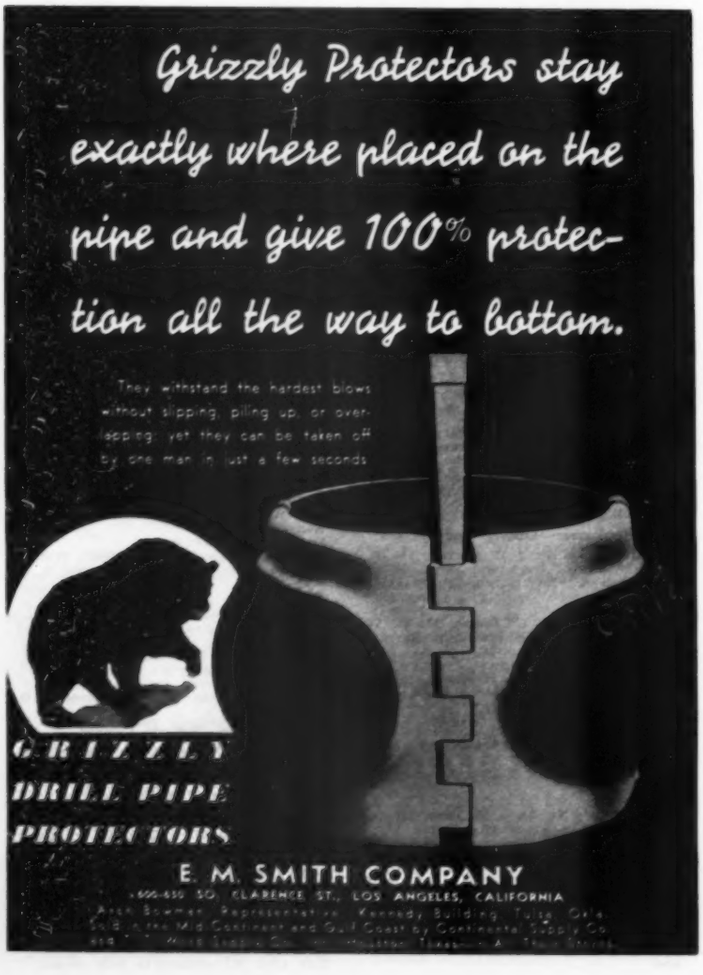
Calhoun County

Continental Oil Co.'s No. 2 American National Realty Co., 660 ft. from NW line, 660 ft. from NE line of Sec. 6, Blk. C, Pedro Garcia Sur.
Milling out of 6-in. csg. at 7,312 ft.

Colorado County

Clyde Creighton et al's No. 1 Witte, 150 ft. S and E of most westerly NW cor. of H. White Sur.
10-in. csg. 341 ft.; T.D. 352 ft.

Coyle & Concord's No. 1 fee, 550 ft. from


Grizzly Protectors stay exactly where placed on the pipe and give 100% protection all the way to bottom.
They withstand the hardest blows without slipping, piling up, or overlapping yet they can be taken off by one man in just a few seconds
GRIZZLY DRILL PIPE PROTECTORS
E. M. SMITH COMPANY

N line, 1,950 ft. from E line of Sec. 45, I.&G.N. Sur.
10¾-in. csg. 610 ft.; T.D. 698 ft.

Fayette County

Lewis Franklin's No. 1 V. Dybala, center of 75-ac. lease, A. Thompson Sur. Location.

Grimes County

Dillinger & Hammer's No. 1 L. P. Lane, 150 ft. S of N line and 150 ft. W of E line of 65-ac. tract, R. P. Stewart Sur. Derrick.

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
S.D. 3,080 ft.

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
7-in. csg. 2,678 ft.; T.D. 2,815 ft.; could not bail fluid down in csg.; S.D.

Patton et al's No. 1 Yeager, 1,000 ft. W of E line, 170 ft. S of N line of 53-ac. tract and survey, A. Ruseolle Sur., NW of Iola Sur.
S.D. 1,000 ft.

Wallace and Jordan's No. 1 Henderson, 330 ft. out of most NE cor. of 40-ac. tract, Chattick & Porter Sur.
Abd. 3,521 ft.

Harris County

C. C. Foster et al's No. 1 H. K. Johnson, 2,000 ft. from S line and C of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.

E. E. Young, tr.'s No. 2 P. S. Griffith, 3,476 ft. S of N line, 2,030 ft. E of W line of A. R. Bodman Sur.
S.D. 2,225 ft.

Hardin County

Frank Beaudoin et al's No. 1 Walton, A. L. Lancaster Sur.
10¾-in. csg. 280 ft.; drlg. shale 520 ft.

Jackson County

A. M. Harris' No. 1 Whitley, 800 ft. out of SE cor. of F. G. Keller Sur.
Location.

Jasper County

Marathon Oil Co.'s No. 1 Jasper County Lbr. Co., 330 ft. out of NE cor. of 176.5-ac. tract, 5 miles SE of Jasper, T. C. Holmes Sur.
T.D. 5,614 ft.; reaming.

Jefferson County

Humble O. & R. Co.'s No. 1 White, 1,224 ft. from E line, 367 ft. from SE line, C. F. McCade Sur.
7-in. csg. 217 ft.; drlg. shale 1,351 ft.

Sun Oil Co.'s No. 1 Herbert & Braussard, 6,890 ft. NW along SW line and 660 ft. NE at R/A to SW line, B. Blackman Sur., Abst. No. 2.
Drlg. shale 7,233 ft.

Lavaca County

Wheelock & Collins' No. 1, 1,000 ft. N, 20 deg. out of SW cor. of F. Baass Sur., thence 400 ft. S, 70 deg. W, M. Wooten Sur.
Drlg. shale 796 ft.

Liberty County

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.

Extension Oil Co.'s No. 1 J. A. Lovett, 330 ft. from E and 660 ft. from S line of lease, P. P. Deevers Sur.
S.D. 4,048 ft.

D. H. Furse's No. 1 J. F. Kover, 330 ft. out of SW cor. of 100-ac. tract, J. R. Mayhon Sur.
Location.

Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 2,550 varas from E line and 505 varas from N line of Samuel Strong Sur.
S.D. 4,198 ft.

A. L. Maxwell's No. 1 M. P. Hinchliff, 200 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur., Sec. 10a.
T.D. 5,588 ft.; cmtd. back to 5,494 ft.; twisted off D.S. at 2,900 ft.; S.D.

Peveto et al's No. 1 Palmer, Joseph Former Sur.
Abd. 6,002 ft.

Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,029 ft.

Turnbull & Irwin's No. 1 Cox, 1,000 ft. from E line and 200 ft. from S line of 108.2-ac. lease, F. J. G. Smiley Sur.
Location.

Matagorda County

Continental Oil Co.'s No. 1 Feife, J. S. Criswell Sur., 3,000 ft. E of W line, 2,800 ft. N of S line of survey.
T.D. 6,073 ft.; 11¾-in. csg. 6,072 ft.; W.O.C.

Dr. Griffith's No. 1 fee, 3,000 ft. from E line and 3,000 ft. from W line of Wm. H. Bell Sur.
Rig up and S.D.

Heimerich & Payne's No. 1 Hawkins, 850 ft. S, 70 deg. W of Cockburn Oil Co.'s No. 6 Hawkins.
T.D. 5,944 ft.; fishing.

Horace M. Smith, Inc.'s No. 1 Wadsworth ranch, 150 ft. out of S cor. of Lot No. 8, S. R. Fisher Sur.
T.D. 8,418 ft.; pulled tubing; prepare to deepen.

Montgomery County

W. L. Belraski's No. 1 T. S. Foster, 1,282 ft. N of S line, 754 ft. E of W line of Blk. 45, J. M. De La Garsa Sur.
Drlg. shale 2,467 ft.

C. Davis' No. 1 Scott, 330 ft. from N and and E lines of S 50 ac. of the W 100 ac. of Scott's 200-ac. tract, Caddo Allen Sur.
Location.

Donday Oil Corp. et al's No. 1 Trice, 330 ft. from NW line, 294 ft. from NE line of 10-ac. tract, T. Cude Sur.
Coring shale 3,755 ft.

Wm. Thompson's No. 1 J. V. Scott, 530 ft. NW of Woodward-Smith and Cooper's No. 1 J. V. Scott, Frances Wheeler Sur.
Drlg. shale 1,310 ft.

Travis Baker et al's No. 1 Foster Estate, 1,200 ft. E of W line and 700 ft. S of N line of Blk. No. 50, J. M. De La Garza Sur.
Derrick.

Mid-Texas Oil Co.'s No. 1 Delta Land & Timber Co., 560 varas from W line, 200 varas from S line of Robert F. Oliver Sur.
Drlg. shale 2,810 ft.

George C. Schmidt's No. 1 Delta Land & Timber Co., 2,800 ft. N, 1,100 ft. E of SW cor. of tract, Wm. McBride Sur.
Drlg. shale 2,320 ft.

Orange County

Blue Line Oil Co.'s No. 1 J. E. Peet Richard, 900 ft. W of E line and 150 ft. S of N line of most easterly NE cor. of 138-ac. tract, Bailou Sur.
Rig up.

Coker Oil Co.'s No. 1 S. T. Mansfield, 500 ft. S, 500 ft. W from NE cor. of 80-ac. tract, J. W. Hall Sur.
Drlg. shale 964 ft.

Ellis Oil Co.'s No. 1 G. W. Pell, 100 ft. from N and 300 ft. from W line of Pell tract in the J. M. Henerie Sur.
S.D. 2,035 ft.

Polk County

Howard Daily et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 16 miles NE of Corrigan.
S.D. 60 ft.

J. F. Anderson's No. 1 E. L. Duke (O.W. D.D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 59, P. J. Mineral Sur.
Waiting on new mud pump; T.D. 5,304 ft.

Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in George Jameson Sur.
Location.

Refugio County

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,820 ft. from E line of J. Coughlin Sur.
Location.

Robertson County

H. L. Patton's No. 1 H. Ely, located on a 616-ac. tract, A. Manchola Sur.
S.D. 3,820 ft.

San Jacinto County

Ralph Sturam et al's No. 1 R. B. Love et al, 475 ft. S of N line and 2,000 ft. W of E line of 177-ac. tract, Drury McGee Sur.
Moving in rig.

Trinity County

Gulf Prod. Co.'s No. 5 Trinity County Lbr. Co., 1,017 ft. S of NE cor. of H. Y. Rook Sur., 444 ft. EW line, O. Peterson Sur.
Junked hole; skidded derrick 12 ft. N; drlg. sandy shale 2,363 ft.

Victoria County

Texas Co.'s No. 1 J. J. Warden, 4,200 ft. N, 55 deg. E and 486 ft. N, 35 deg. W from SW cor. of Warden ranch, Edward McDonough League.
T.D. 4,514 ft.; 5-min. D.S. test in sand 4,490-95 ft.; show of gas from 4,486-4,514 ft.; tested 2 joints of mud with 235 lbs. W.P.; ¾-in. choke on bottom; ⅝-in. choke on top; waiting orders.

Washington County

C. J. Laas' No. 1 T. Weinert, 1,840 ft. SW from E cor. of survey, thence 250 ft. NW at R/A, T. P. Borden Sur.
Coring wtr. sand 1,912 ft.

Wharton County

Navarro Oil Co.'s No. 1 Schoellman, 330 ft. S of S and E lines, 1,238 ft. from W line of Nasario Mansha Sur.
Drlg. sandy shale 4,565 ft.

Pure Oil Co.'s No. 1 Paige, 1,397 ft. NE and 467 ft. SE from W cor. of 159.27-ac. lease, James Pirie Sur.
Rig up.

Sterling Oil & Ref. Co.'s No. 1 Frank Janik Sr., 1,859 ft. from N line, 467 ft. W from SE cor. of Janik tract, Johathan Scott Sur.
Coring sand 7,310 ft.

Texas Co.'s No. 1-C Pierce, 17,997 ft. N, 62 degrees E, 3,400 ft. N, 28 degrees W from S cor. of Pierce Estate Land, John Caldwell Sur.
Bldg. derrick.

SOUTH LOUISIANA

Avoyelles Parish

Southern Star Pet. Co.'s No. 1 Boyette, Sec. 28-3S-5W.
Coring sand 4,410 ft.

Beauregard Parish

Richardson & Martin's No. 1 Southwest Lbr. Co.
Location.

Calcasieu Parish

Fred Oil Co.'s No. 2 Faist, 262 ft. E and 8 ft. S of NW cor. SE¼ Sec. 26-8s-10w.
S.D. 3,645 ft.

Nicholas McCaleb's No. 1 Grey, 2,200 ft. S, 1,200 ft. E of NW cor. Sec. 22-8s-13w.
S.D. 1,565 ft.

Union Sulphur Co.'s No. 1 Prairie Land & Canal Co., 1,312 ft. S, 610 ft. W of NE cor. of Sec. 1-11s-9w.
Drlg. wtr. sand 7,121 ft.

Wheeler Oil Corp.'s No. 1 School Lot, 1,708 ft. E, 1,325 ft. N of SW cor. Sec. 16-9s-7w.
Drlg. shale 6,310 ft.

Cameron Parish

Magnolia Pet. Co.'s No. 1 J. B. Broussard, 330 ft. E and S, out of NW cor. of the SW¼ of SE¼ of Sec. 13-12s-9w.
T.D. 7,890 ft.; stuck drill stem second time; fishing; set whipstock 7,481 ft.

Steinberger Pet. Co.'s No. 1 Drew, 330 ft. out of NW cor. NE¼ of Sec. 26-10s-11w.
Location.

Southern Sulphur Co.'s No. 1 State, Sec. 29-15s-10w.
Abd. 3,250 ft.

East Baton Rouge Parish

Superior Oil & Prod. Co.'s No. 1 Duplanter-Community, 1,500 ft. westerly along the N line from the NE cor. of D. A. and E. A. Duplanter's 130.7-ac. tract, thence 330 ft. at R/A.
Drlg. shale 8,399 ft.

Evangeline Parish

J. E. Ladue's No. 4 Vidrien, Sec. 34-3-2.
Rig up and S.D.

East Feliciana Parish

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,589 ft.

Iberia Parish

Jefferson Lake Oil Co.'s No. 1 State, Twp. 12s-5e.
T.D. 6,160 ft.; 9⅝-in. cmtd. on bottom.

Little Pigeon Oil Co.'s No. 1 McHugh, 1,300 ft. S, 229 ft. W of NE cor. Sec. 26-12s-10e.
S.D. 3,165 ft.

Meade Oil Co.'s No. 1 Hamilton, near town of Loze, in the NW cor. of parish, Sec. 38-12-5.
S.D. 200 ft.

Texas Co.'s No. 1 State Fausse Point.
T.D. 6,370 ft.; making electrical coring test.

J. S. Watterman's No. 1 St. Julian, 75 ft. E of W line of property and 50 ft. N of Lake Poigneur, Sec. 4-12s-5e.
S.D. 1,510 ft.; (corrected).

Jefferson Davis Parish

Howard Naylor et al's No. 1 Johnson-Bordeaux, 1,734 ft. N, 52 deg. N, 45 min. E. and 1,853 ft. S, 37 deg. 15 min. E out of SW cor. Sec. 39-10s-3w.
S.D. 810 ft.

LaFourche Parish

Coastal Oil Co.'s No. 2 Constantine, 1,476 ft. N, 809 ft. E of SW cor. Sec. 26-21-22e.
Location.

St. Bernard Parish

Emerald Pet. Corp.'s "Shell Beach Properties" No. 1, on S edge of Bayou Louis, Sec. 31-13s-15e.
T.D. 7,385 ft.; stuck drill stem; P.B. to 1,300 ft.; to sidetrack.

St. Martin Parish

Texas Co.'s No. 1 State Lake, 5,180 ft. E, 350 ft. N of SW cor. of Sec. 10-10s-9e.
Rig up.

Texas Co.'s No. 7 St. Martin Land, 2,042 ft. N, 500 ft. W of SE cor. of Sec. 17-8s-7e.
Drlg. lime 8,749 ft.

Plaquemines Parish

Lo-Tex Explin. Co.'s No. 1 Hero Plantation, Sec. 72-14s-24e.
S.D. 2,200 ft.

Southern Sulphur Co.'s No. 1 Manhattan Fruit Co.
S.D. 1,536 ft.

Venice Oil Co.'s No. 1 Manhattan Fruit, Sec. 26-21s-30e.
Drlg. shale and lime 2,043 ft.

Rapides Parish

Amerada Pet. Corp.'s No. 1 Wells Land Co., 490 ft. from W line, 2,450 ft. from S line of Sec. 53-1s-2e.
Moving in rig.

Vermillion Parish

Delcambre & Shelton's No. 1 Adam Delcambre, south degrees E, 825 ft. from most northerly cor. of irregular Sec. 62-17-5.
S.D. 1,471 ft.

Terrebonne Parish

Dulac Oil Co.'s No. 1 Bourg, Sec. 10-20-17s.
10¾-in. 760 ft.; W.O.C.

LA.-ARK. WILDCATS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

Avoyelles Parish

Bell Oil Co.'s No. 2 Thompson-Koltz, 450 ft. S, 350 ft. E, NW cor. Sec. 11-2n-5e.
Partly R.U. and S.D.

Southern Star Pet. Co.'s No. 1 O. G. Boyette, Sec. 28-3-5e.
S.W. and abd. 4,502 ft.

Bienville Parish

N. V. Duncan et al's No. 1 J. Miller, 150 ft. N, 450 ft. E, SW cor. NW Sec. 9-18-7.
Coring 2,559 ft.

Bossier Parish

Ark.-La. Gas Co.'s No. 3 R. O. Roy, 748 ft. N, 1,270 ft. E, SW cor. Sec. 18-17-11.
P.B. to 750 ft. from 2,900 ft.

Bossier O. & G. Co.'s No. 3 Sherrill, 330 ft. N and W, SE cor. Sec. 12-19-12.
Fsg. for D.S. 2,025 ft.

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, S cor. NW NW Sec. 3-21-13.
Dry and abd. 2,650 ft.

Virgil Likens' No. 1 Palmer, 1,877 ft. S, 2,614 ft. W of NE cor.
Moving in rig.

W. E. Neil's No. 1 Curtis Plant, Sec. 19-17-12.
S.D. 230 ft.

Plain Dealing Synd.'s No. 1 Dodson, 330 ft. S and E, NW cor. SW SE Sec. 25-23-13.
Coring 3,562 ft.

Producers O. & G. Co.'s No. 1 Edwards, 660 ft. N and W, SE cor. Sec. 27-18-11.
S.D. 587 ft.

R. L. Skidmore et al's No. 1 Davis, Sec. 12-18-13.
Drlg. 2,320 ft.

Caddo Parish

J. Ed Bailey, tr.'s No. 1 Hartzo, NW cor. NE NW Sec. 28-22-16.
S.D. 1,236 ft.

Holly Oil Co.'s No. 1 Thigpen & Herold, Sec. 15-20-15.
T.A. 2,293 ft.

F. D. Hyde's No. 1 Thigpen & Herold, 350 ft. S and E. C Sec. 5-15-15.
Drlg. 1,263 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
Tested S.W.; arranging to deepen from 2,712 ft.

Leonard Co.'s No. 46 Crystal, 250 ft. N and W, SE cor. SW NE Sec. 13-21-15.
Set 10-in. 40 ft.; drlg. 911 ft.

Leonard Co.'s No. 1 Gamm, NE SE Sec. 35-21-15.
S.W. and abd. 2,265 ft.

Leonard Co.'s No. 1 Muslow, NE cor. NW NE Sec. 9-20-15.
S.W. and abd. 2,231 ft.

Murray Oil Co.'s No. 2 Noel, 495 ft. S, 735 ft. E, NW cor. SW Sec. 15-20-15.
W.O.S.R. 2,290 ft.

Plummer et al's No. 1 Hughes, SW cor. NE NW Sec. 15-20-15.
Drlg. 1,120 ft.

Press & Lambert's No. 2 Hughes, 350 ft. N and W of C Sec. 15-20-15.
W.O.S.R. 2,200 ft.

Puritan Oil Co.'s No. 1 Land, 550 ft. E, 250 ft. N, SW cor. Sec. 4-20-15.
Rigging up.

Pyramid O. & G. Co.'s No. 2 Winters, 330 ft. N, 990 ft. W, SE cor. Sec. 4-18-16.
Drlg. 2,195 ft.

M. Rodgers' No. 5 Muslow, Sec. 4-20-15.
Set 10-in. 110 ft.; drlg. 200 ft.

A. C. Scott et al's No. 1 Noel Est., 330 ft. S and E, NW cor. Sec. 22-20-15.
W.O.S.R. 2,261 ft.

Shreveport Oil Corp.'s No. 1 Caddo Levee Board, 300 ft. S, 150 ft. W, NE cor. Sec. 8-20-15.
Set 6-in. at 2,170 ft.

Shreveport Oil Corp.'s No. 2-G Muslow, 780 ft. S, 578 ft. W, NE cor. NW Sec. 9-20-15.
Set 10-in. 97 ft.

Simplex Oil Co.'s No. 8 Thomas, SE cor. SW NE Sec. 15-20-15.
Drlg. 1,900 ft.

Texas Co.'s No. 2 Thigpen, 300 ft. S and E, C Sec. 15-20-15.
Drlg. 2,238 ft.

Triangle Agency's No. 1 Ellerbe, 872 ft. E, 80 ft. N, SW cor. NW Sec. 4-20-15.
Bailing 2,158 ft.

Ty-Stan, Inc.'s No. 1 Jolly, 400 ft. S and E, NW cor. SW SW Sec. 22-22-15.
Drlg. 1,700 ft.

Caldwell Parish

Caldwell Drlg. Co.'s No. 1 Gore, 600 ft. W, 380 ft. S, NE cor. SE Sec. 30-12-3e.
Drlg. 810 ft.

Critchett & Woods' No. 1 Kyles, NE cor. SW NE Sec. 18-11-3e.
Set 12½-in. 103 ft.; drlg. 670 ft.

G. W. Zeigan et al's No. 1 La.-Central Lbr. Co., 175 ft. S and E, NW cor. SW SW Sec. 25-13-3e.
S.D. 1,200 ft.

Catahoula Parish

McIntyre et al's No. 1 Tensas, 1,740 ft. S, 990 ft. E, NW cor. Sec. 18-10-4e.
Set 10-in. 347 ft.

Claiborne Parish

E. T. Oakes' No. 1 H. W. Patton Est., 660 ft. S and W, NE cor. Sec. 1-20-5w.
Drlg. 2,425 ft.

De Soto Parish

E. B. Bird et al's No. 1 J. H. Johns, 330 ft. N and W, C Sec. 20-14-6.
S.D.; W.O. 2,630 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
Arranging to set csg. 2,590 ft.

P. G. Fraley et al's No. 1 G. R. Stell, 330 ft. S and W, NE cor. Sec. 5-12-16.
R.U. and S.D.

Leslie Prod. Co.'s No. 1 Ramsey, 150 ft. N and W of C Sec. 36-11-11.
Set 10-in. 45 ft.

National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11.
S.D. 120 ft.

M. L. Stephens' No. 1 Alston, 345 ft. S, 270 ft. W of C Sec. 11-11-16.
Running 2-in. tubing 2,003 ft.

Grant Parish

Alexander et al's No. 1 Maxwell, Sec. 9-9-1e.
S.D. 525 ft.

Jackson Parish

American Liberty Oil Co.'s No. 1 Lusk, C NE NE Sec. 1-16-1w.
Dry and abd. 3,827 ft.

La Salle Parish

Fred W. Hensley's No. 1 Urania, Sec. 7-10-2e.
Set 10-in. at 100 ft.; set 6-in. at 1,508 ft.; W.O.S.R. 1,516 ft.

H. L. Hunt, Inc.'s No. 1-A King, 225 ft. S, 210 ft. E, NW cor. NE NW Sec. 36-10-1e.
W.O.S.R. 1,524 ft.

Lincoln Parish

Herman L. Brown's No. 1 Monstead, 1,320 ft. S, 660 ft. E of C Sec. 10-17-4w.
Drlg. 3,657 ft.

Madison Parish

San. Land & Exploration Co.'s No. 1 Delta Land Co., Sec. 1-17-12e.
S.D. 1,980 ft.

Morehouse Parish

J. H. Gibson, tr.'s No. 1 Thomas, 330 ft. S and W, NE cor. Sec. 16-22-7e.
Coring 2,900 ft.

Southern Carbon Co.'s No. 16 Tensas, Sec. 34-21-4e.
Set 6-in. 2,092 ft.

Zeiger & Bacon's No. 2 Crossett Lbr. Co., 3,870 ft. N, 505 ft. E, SE cor. SE SW of Sec. 36, in Sec. 41.
S.D. 50 ft.

Ouachita Parish

American Liberty Oil Co.'s No. 1 Golson, C NW Sec. 25-17-1e.
S.D.; rig repair 4,565 ft.

Ark.-La. Gas Co.'s No. 11 Rea Green, 660 ft. S, 1,320 ft. E, NW cor. NE.
Set 10-in. 146 ft.; drlg. 2,030 ft.

Carbon Consolidated's No. 1 Mabnet & Piper, 1,672 ft. W, 396 ft. S, NE cor. Sec. 1-18-3e.
Set 10-in. 142 ft.; set 6-in. 2,134 ft.

J. E. Farrell & Co.'s No. 5 State of La., 1,692 ft. E, 125 ft. N, N¼ cor. Sec. 22, in Sec. 49-20-4e.
Rigging up.

Rapides Parish

Amerada Pet. Co.'s No. 1 Well, 2,450 ft. N, 550 ft. E, SW cor. Sec. 53-1s-2e.
S.D. 54 ft.

Natchitoches Parish

Ab Jones' No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,032 ft.

Howard & Kittrell's No. 1 DeBlieux, 1,395 ft. E, 150 ft. S, NW cor. Sec. 82-10-7.
Drlg. 866 ft.

Red River Parish

J. S. Tuffree's No. 1 Wilkinson, 1,320 ft. S and W, NE cor. Sec. 11-12-11.
S.D. 1,395 ft.

Sabine Parish

B. S. & M. Oil Co.'s No. 1 Tatum, 330 ft. S and E, NW cor. NW SE Sec. 32-8-13.
S.D. 1,590 ft.

G. H. Collins' No. 1-C Cranford, 330 ft. S and E, NW cor. SW NW Sec. 28-9-13. S.W. and abd. 2,077 ft.

Hill Myers' No. 1 Magness, Sec. 30-9-13.
Set 10-in. 45 ft.

M. T. Hines' No. 1 J. B. Hill, SW NE Sec. 4-6-11.
Tested S.W. 3,012 ft.; S.D.; W.O.

Jack Lent's No. 1 Williams, Sec. 12-7-11.
S.D. 1,820 ft.

Lee Whitehurst's No. 3 Frost Lbr. Ind., 660 ft. S and E NW cor. Sec. 29-9-12.
Set 10-in. 60 ft.; set 6-in. 1,549 ft.

Union Parish

Interstate Nat. Gas Co.'s No. 1 Talton, 660 ft. S and W, center Sec. 14-20-2e.
Set 6-in. 2,988 ft.

Southern Prod. Co.'s No. 1 Clark, 500 ft. N and W, SE cor. NW NW Sec. 17-23-1e.
S.D. 2,296 ft.

Webster Parish

Bennett & Eldred's No. 1 Fulbright, NE NE Sec. 1-18-10.
Drlg. 220 ft.

Winn Parish

Parsons et al's No. 1 Tremont Lbr. Co., 660 ft. S, 330 ft. E NW cor. SW Sec. 10-12-2w.
S.D. 210 ft.

ARKANSAS

Arkansas County

Grand Prairie Realty Co.'s No. 2 Fischer, 412 ft. S, 12 ft. W, NE cor. NW NW Sec. 6-6-4w.
Set 10-in. 92 ft.; drlg. 450 ft.

Ashley County

Benedum & Trees' No. 1 Holmes, C NE SW Sec. 4-17-5.
Location.

Glenn E. McFaddin et al's No. 1 Boreine Farms, 660 ft. S and W, NE cor. Sec. 1-18-8.
S.D. 2,800 ft.

Texas-Seaboard Oil Co.'s No. 1 fee, C NW NE Sec. 28-17-4.
Coring 2,486 ft.

Calhoun County

Hunter Co.'s No. 1 Stout Lbr. Co., 2,077 ft. S, 150 ft. E, NW cor. NE Sec. 32-16-13.
Drlg. 3,484 ft.

Columbia County

J. G. Cubage et al's No. 1 Rhea, 150 ft. N line, 330 ft. E, SW cor. SE SE Sec. 12-17-22.
S.D. 3,506 ft.

Southern States Gas Co.'s No. 1 Piney Woods Lbr. Co., 330 ft. N and E, SW cor. NE NW Sec. 10-20-22.
S.D. 960 ft.

Dallas County

McCall & Kelly's No. 1 Ray Owen, 330 ft. S and E, NW cor. NW SW.
Rigging up.

Hempstead County

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-12-26.
S.D. 1,992 ft.

F. W. Martin's No. 2 Lafferty, C NW Sec. 17-14-24.
Rigging up.

LaFayette County

Earl F. Fox' No. 2 Coleman Bros., NE NE Sec. 30-16-24.
Rigging up.

Kamon & Neely's No. 1 Cockran, NW cor. SE SW Sec. 26-19-25.
S.D. 4,450 ft.

Riggs Bros.' No. 1 Dubose, SE cor. SW NW Sec. 35-15-24.
O.W.D.D. from 2,817 ft.

Transportation Pet. Co.'s No. 1 Cockran, 300 ft. S and W, NE cor. SE Sec. 26-19-25.
Testing 1,900 ft.

Miller County

E. J. Donohue's No. 3 E. L. Beck, 620 ft. S and E, NW cor. SW NE Sec. 33-15-26.
Drlg. 2,530 ft.

M. D. K. Fitzwater's No. 1 E. H. Beck, 150 ft. N and E, SW cor. NW SW Sec. 34-15-26.
W.O.S.R. 2,919 ft.

King Oil Corp.'s No. 1 G. W. Crank, SW NE Sec. 19-16-25.
Set 10-in. 66 ft.

Frank Roe et al's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.

Snowden & Hill's No. 1 E. H. Beck, 255 ft. E and 330 ft. S, NW cor. SW SW Sec. 34-15-26.
W.O.S.R. 2,926 ft.

Two Forty Oil Co.'s No. 2 Beck, SE cor. NW SE Sec. 33-15-26.
Set 10-in. 100 ft.

Nevada County

Carnett et al's No. 1 Floyd Munin, C SW Sec. 16-14-22.
S.D. 50 ft.

Ouachita County

Snow-Black Pet. Co.'s No. 1 Bedford, 680 ft. N and 150 ft. E, SW cor. Sec. 32-11-18.
Testing 1,005 ft.

Poinsett County

Rockwell Dev. Co.'s No. 1 W. A. Smith, NE NE Sec. 13-11n-3e.
Drlg. shale 1,560 ft.

Union County

Arkansas Southern Oil Co.'s No. 1 F. R. Laney, Sec. 30-19-16.
Set 10-in. 175 ft.

Gardy Drlg. Co.'s No. 1 Craig, Sec. 25-17-15.
Testing 2,211 ft.

H. L. Hunt's No. 15 E. F. Gregory, 330 ft. N and W, SE cor. Sec. 10-17-14.
T.A. 3,478 ft.

Mrs. R. K. Jones et al's No. 1 Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Arranging to test 3,297 ft.

Lion Oil Ref. Co.'s No. 7 Hardy-Murphy, 510 ft. N, 200 ft. W, SE cor. NE NW Sec. 9-16-15.
Rigging up.

Marine Oil Co.'s No. 3 M. H. Simmons, Sec. 16-18-13.
Set 7-in. 3,526 ft.

C. E. Murdock's No. 1 Pumphrey, C SW NW NE Sec. 11-17-14.
Derrick abd.

F. F. Roberts et al's No. 1 Galion Lbr. Co., 330 ft. S and E, NW cor. NW SE Sec. 10-16-14.
Set 10-in. 104 ft.

MISSISSIPPI

Amite County

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.; taking new leases.

Bolivar County

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
Drlg. 1,285 ft.

Clarke County

L. Beckwith et al's No. 1 Long Bell Lbr. Co., 528 ft. S, 125 ft. W of C Sec. 10-2n-16e.
T.A.; lack of funds.

Clarke County Oil Co.'s No. 1 Dora Butler, C SW SW Sec. 15-2n-16e.
Set 10-in. 63 ft.

Harrison County

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

Hinds County

Weaver & Alexander's No. 2 Wathall, Sec. 25-4n-1e.
Drlg. plug 2,441 ft.

Lauderdale County

Bob Dalton's No. 1 Bounds, Sec. 24-7n-15e.
S.D.; W.O. 1,600 ft.

Monroe County

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
S.D.; W.O. 2,537 ft.; (corrected).

P. J. McAlpine's No. 1 Crook, 1,090 ft. S, 90 ft. W, NE cor. Sec. 15-13s-13w.
Arranging set 6-in. 2,502 ft.

Simpson County

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
T.A. 2,510 ft.

Warren County

H. W. Elliott et al's No. 2 R. L. Parker, 780 ft. E, 1,570 ft. S, NW cor. Sec. 14-14n-1e.
S.D.; high wtr. 1,600 ft.

Washington County

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w.
S.D. 2,175 ft.

Winston County

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
S.D. 2,250 ft.

ALABAMA

Covington County

Geometer Prod. Corp.'s No. 1 Culbreath, SW cor. SW NE Sec. 8-2n-14e.
S.D. 6,300 ft.

Houston County

Rice O. & G. Co.'s No. 1 Oakley Est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 2,776 ft.

Lamar County

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
Drlg. 4,545 ft.

FLORIDA

Lake County

Oil Dev. Co. of Florida's No. 1 South Lake, SE SE Sec. 17-24s-25e.
S.D. at 1,946 ft. after coring 75 ft. of lime; awaiting acid treatment.

LA.-ARK. PROVEN

NORTH LOUISIANA

Caddo—Rodessa

Ark.-La. Gas Co.'s No. 3 Rodessa O. & Land Co., 1,945 ft. S, 719 ft. W, NE cor. Sec. 22-23-16.
Rigging up.

Ark.-La. Gas Co.'s No. 1 J. S. Teamer, 330 ft. N and 660 ft. W, SE cor. SW SE Sec. 13-23-16.
Drlg. 5,085 ft.

Eastern Texas Prod. Co.'s No. 1 Caddo School Board, CSL NE SW Sec. 23-23-16.
Rigging up.

Haynes Prod. Co.'s No. 1 W. B. Lawton, 1,980 ft. N and E, SW cor. Sec. 14-23-16.
Set 7-in. 5,811 ft.

Haynes Prod. Co.'s No. 1 Harry Otwell, 660 ft. N, 560 ft. W, SE cor. Sec. 15-23-16.
Drlg. 5,363 ft.

Haynes Bros. Drlg. Co.'s No. 1 Tyson, 660 ft. S and E of C Sec. 24-23-16.
Comp. 70,998,000 ft. gas, 5,885 ft.

R. W. Norton's No. 1 Caddo Levee Board, 660 ft. N and W, SE cor. NE Sec. 21-23-16.
Drlg. 4,070 ft.

O'Brien Bros.' No. 1 Rodessa Oil & Land Co., 660 ft. S and 330 ft. E, NW cor. SW Sec. 14-23-16.
Drlg. 4,987 ft.

Pelican Oil & Gasoline Co.'s No. 1 Sexton, 660 ft. S and W, NE cor. SE Sec. 14-23-16.
Drlg. 5,235 ft.

United Gas Public Service Co.'s No. 1 W. M. Bremer, 1,980 ft. N and 660 ft. E, SW cor. Sec. 22-23-16.
Drlg. 4,802 ft.

United Gas Public Service Co.'s No. 1 Gibson Est., 660 ft. N, 1,980 ft. W, SE cor. Sec. 15-23-16.
Drlg. 3,961 ft.

United Gas Public Service Co.'s No. 1 Rodessa Oil & Land Co., 1,980 ft. N and 660 ft. W, SE cor. Sec. 15-23-15.
Drlg. 4,392 ft.

United Gas Public Service Co.'s No. 1 Thomas Unit, 634 ft. S, 1,962 ft. E, NW cor. Sec. 23-23-16.
Drlg. 5,300 ft.

Sabine Parish—Zwolle

Alexander & Crane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
S.D. 2,655 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 2,670 ft.

H. C. Mauilding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
S.D. 400 ft.

K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Location.

Texas Co.'s No. 8 E. Stille, 330 ft. S, 340 ft. E, NW cor. NE Sec. 3-7-11.
Dry and abd. 2,740 ft.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 2-3-12.
S.D. 2,742 ft.

EAST TEXAS

(Border Counties)

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D. Spain Sur.
P.B. to 3,524 ft.

Marion County

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
P.B. to 2,443 ft.

Panola County

R. A. Graddy's No. 1 M. J. McCormick, J. McAdams Sur.
Drlg. 2,500 ft.

George Hudson et al's No. 1 J. F. Nail, C. McGeary Sur.
Set 8-in. 40 ft.; fishing for core bbl. at 2,345 ft.

Geo. Le Grand's No. 1 P. J. Wardleigh, A. Thompson Sur.
Set 10-in. 62 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Set 10-in. 64 ft.

Fred Stovall Drlg. Co.'s No. 1 H. D. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

Shelby County

Cliff Stoval's No. 1 Pickering Lbr. Co., C. H. Patterson Sur.
S.D.; rig repair, 1,485 ft.

E. C. TEXAS WILDCATS

Week Ending August 31

Camp Hill Area—Anderson County

Gulf's No. 3 Davey & Royall, James Squires Sur., 330 ft. N along E line of H. Main Sur., F.S.E.C., and 330 ft. E at R/A, E offset Southern Pine Lbr. Co.'s No. 1-A, 330 ft. N along E line, H. Main Sur. and 330 ft. at right angle.
Began 8-22-35; 10-in. 599 ft.; drlg. 2,499 ft. in shale.

Gulf's No. 1 E. T. McCain, Phillip Martin Sur., 500 ft. S of N line and 200 ft. W of E line of tract, on 80.17-ac. tract.
Began 8-24-35; 10-in. 536 ft.; drlg. 2,000 ft. in sand and boulders.

Gulf Prod. Co.'s No. 2-A Southern Lbr. Co., 330 ft. W along N line of 115.3-ac. tract from SE cor. of L. B. Ross' 37.6-ac. tract, and 330 ft. S at R/A, south offset to No. 1 Ross.
Comp.; T.D. 5,236 ft.; made 65.1 bbls. first 19 hrs., ¼-in. choke; 10 per cent B.S.&W.; prod. decreasing.

Cayuga Area—Anderson County

Tide Water Oil Co. et al's No. 21-A Wills, 4,079 ft. N and 2,333 ft. W of lease, S Edmondson Sur. (Trinity test).
Started drlg. again; T.D. 8,867 ft.

Long Lake Area—Anderson County

Tide Water and Texas Seaboard Oil Co.'s No. 3 Goode, 2,500 ft. from most northerly N line and 2,200 ft. from most easterly E line of F. Smith Sur.
T.D. 3,795 ft. in shale and shells; P.G. 2,325-84 ft.; top Austin 3,300 ft.; B.A. 3,639 ft.; drlg. ahead.

Tide Water and Texas Seaboard Oil Co.'s No. 1 H. B. Keeling, 1,408 ft. from S line and 126 ft. from E line, Simon Sanches Sur., one-half mile E of Tucker.
T.D. 2,073 ft.; 10-in. 2,073 ft.; W.O.C.

Tide Water-Seaboard's No. 2 Shaw & Cern, S. Sanches Sur., 3,266 ft. E line and 2,333 ft. S line of 1.216-ac. tract, or 935 ft. N and 932 ft. W of No. 1 Shaw & Cern.
Moving in material.

Angelina County

Burnham et al's No. 1 Norton Properties, 700 ft. NW cor. and 600 ft. from E of W. M. Johnson Sur., 8 miles SW of Zavala in SE part of county.
T.D. 40 ft.; W.O.C.; S.D.

Howze Oil Co.'s No. 1-C Finley, 150 ft. out of NW cor. of 85-ac. tract, 7 miles NE of Lufkin, Bluford Mitchell Sur.
T.D. 1,043 ft.; sandy shale; elev. 278 ft.; S.D. for wtr.

Hunter Co., Inc.'s No. 3 Long Bell Lbr. Co., 250 ft. from N and W lines in J Fulcher Sur., 5 or 6 miles SE of Huntington.
Began 8-24-35; 10-in. 100 ft.; drlg. 1,571 ft.

Y. D. Spell's No. 1 B. F. Thompson, J. R. Williams Sur., 150 ft. out SW cor. of tract and survey, 2½ miles N Lee-Tex's No. 1 Guissler.
Top Carrizo 2,180-87 ft.; S.D. 2,330 ft. for wtr.

Bowie County

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
S.D. 1,121 ft.

Woodley & Bentley's No. 1 Lumpkin, 330 ft. out of NE cor. of 245-ac. tract, J. McDermot Sur., 1 mile SW of Dalby Springs.
S.D. 120 ft.

Cherokee County

Shell Pet. Corp.'s No. 1 New Birmingham Dev. Co., 190 ft. S and 150 ft. E from SE cor. T. J. Wood 160-ac. lease, Levi Jordan Sur.
Core 5,292-5,362 ft.; rec. 7 ft. mud and green sand; no shows; ran Schlumberger; 10-min. D.S. test 5,289-5,302 ft.; ½-in. chokes top and bottom; tested 1,000 ft. of S.W.; dry and abd.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,553 ft.

Falls County

Bell & Hays' No. 1 Taylor, 155 ft. from

N and 465 ft. from E of 20-ac. tract, J. A. Manchaca Sur., Chilton area.
Began 8-15-35; drlg. 320 ft.

Fannin County

B. F. Allen's No. 1-B Argo, center of 16½-ac. tract in J. G. Swisher Sur., 1 mile S of Ector.
S.D. 405 ft.

Warner Moore et al's No. 1 Hancock, 400 ft. from W and 150 ft. N lines, Sec. 16, L. M. Baldock Sur., ½ mile S of Trenton.
6-in. 657 ft.; top sand 657 ft.; T.D. 669 ft.; claim show oil in sand.

Freestone County

J. E. Milburn's No. 1 S. E. McShan, 4,000 ft. NW and 5,000 ft. NE of tract, 3 miles SE of Donie, G. Diaz Sur.
S.D. 270 ft.

Stewart & Watson's No. 1 S. A. Burleson (Ball), 466 ft. from E and W at right angles from NE cor. of A. Wade 75 (63.6) acre tract.
M.I.R.

Gregg County

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
S.D. 3,710 ft.; comp.

L. P. Kean's No. 1 S. M. Smith, 1,000 ft. E and 1,350 ft. S of W. W. Avery Sur., 4 miles SE of Gladewater.
T.D. 1,651 ft.; to move in heavy rig.

Henderson County

Kirby Pet. Co.'s No. 1 C. L. Litchfield, 600 ft. N and 350 ft. W, I. Clendennen Sur.
Derrick comp.

Roeser & Pendleton's No. 1 Litchfield, 315 ft. from S and 467 ft. from W, T. J. Lindsey Sur.
T.D. 925 ft.; drlg. shale; elev. 324 ft.

H. M. Wilson's No. 1 fee, 970 varas S of NE cor. of 943-ac. tract, 5 miles N of Malakoff.
Derrick.

Hopkins County

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Bros. A. Caro Sur.
S.D. 2,950 ft.

Hunt County

Long & Wolfe et al's No. 1 A. L. Chapman, 375 varas from N and 2,060 ft. from W line of Enos Murphy Sur., 6 miles W of Greenville.
T.D. 2,375 ft.; comp.

J. F. Morrissey & Co., Inc.'s No. 1 Fry, 543 ft. from N and 200 ft. from E of 146-ac. tract, 7 miles N of Commerce, C. Davis Sur.
T.D. 4,407 ft.; fishing.

Kaufman County

Germany et al's No. 1 Clark, 961 ft. N and 1,000 ft. W of tract, S. Eden Sur.
T.D. 1,780 ft.

Murry & Emerson's No. 1 G. W. Martin, 1,660 ft. from W and 250 ft. from N of 140-ac. tract, from W. L. C. Butler Sur., 2 miles NE of Kemp.
S.D. 1,784 ft.

Lamar County

Gulf Petroleum Co.'s No. 1 A. L. Darnell, 1,490 varas from S and 1,080 varas from W line of H. L. Williams Sur., 4 miles NE of Paris.
Drlg. 1,600 ft. in shale and lime.

C. C. Lowrey's No. 1 Rees, Alford Moore Sur., 250 ft. W and 650 ft. N of SE of survey, 7 miles NW of Paris.
Derrick.

Leon County

Killough & Tucker's No. 1 G. W. Lee, center of NE 10 acres of 230-ac. tract, J. Burleson Sur.
T.D. 5,641 ft.; comp.

Tide Water Oil Co. et al's No. 1 G. W. Burkett, 1,435 feet from SE and SW lines of S. Sanches Sur. No. 7.
T.D. 5,309 ft.; 5-in. 5,299 ft.; perf. 5,244-60 ft.; 33 holes; C.O. wash wtr. and large amount of gas.

Tide Water-Seaboard's No. 1 A. W. Johnson, located in S. Sanchez No. 7, 1,500 ft. E and 1,200 ft. N of most westerly SW cor. 425-ac. lease.
M.I.D.

Limestone County

J. Edward Mills' No. 1 Hunt, 200 ft. from N, 350 ft. from W line 34.75-ac. tract, Israel Wood Sur., 3 miles NE of Kosse.
S.D. 3,302 ft.

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
T.D. 3,121 ft.; bailing S.W.; small show gas.

McLennan County

T. Cunningham's No. 1 M. G. McKee, 940 ft. from S and 2,640 ft. W of 640-ac. tract, M. Snell Survey, near Bruceville.
Location.

Riley & Barrow's No. 1 Hortsman, V. C. Walters Sur., 500 ft. from most northerly N line, 500 ft. from most westerly E line, 500-ac. tract, 1½ miles S McGregor.
Drlg. 250 ft. in shale.

Nacogdoches County

Rosser Bros. & Jackson's No. 1 Mattby, 330 ft. out of NE cor. 60-ac. tract, Pedro J. Esparza Sur., 5 miles S of Nacogdoches.
Spud. 8-27-35.

Navarro County

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-ac. tract, 1 mile W of Dawson, William Moss Sur.
S.D. 1,500 ft.

Wiggins et al's No. 1 Donoho, 450 ft. from N and 1,101 ft. from E lines in John Couple Sur., SW of Corsicana.
Prep. to set csg. 1,187 ft.

Rains County

Allen & McClung's No. 1 Giles, T. Cunningham Sur., Abst. 143, 330 ft. from W line and 200 ft. from N line of 105-ac. Giles tract, 5 mi. SW of Emory.
Derrick.

Allen & McClung's No. 1 Ida Bullard, N. Brantely Sur., 1,300 ft. from W line and 200 ft. from N line of 25-ac. tract, 2 mi. SW of Emory.
Derrick.

Allen & McClung & Collard's No. 1 S. P. Cain, 1,350 ft. N and 1,550 ft. W line of J. Harges Sur., 1 mile NW of Emory.
Location.

Red River County

Joe Dinger et al's No. 2 Morris, John Guest Sur., approx. 175 ft. NW of No. 1 Morris, 1 mile S Detroit.
Derrick.

R. H. Chew et al's No. 1 J. F. Brooks, 900 ft. N and 600 ft. of W line of 320-ac. tract, B. Gooch Sur., ½ mile S of Bagswell.
Derrick.

Joiner's No. 1 D. Rust, C. C. Wilborn Sur., 234 ft. N and 254 ft. W of most southerly SE cor. of Sur., just south of Avery.
Derrick.

Rusk County

J. W. Shipman et al's No. 1 Citizens Natl. Bank, NE cor. of 125-ac. tract, J. J. Y'Barbo Sur., 4 miles NE of Henderson.
Approx. T.D. 2,500 ft. in shale; S.D. to repair water pump.

Smith County

W. R. Harrison's No. 1 Rushing, J. Herring Sur. (O.W.D.D.).
S.D. 4,330 ft.; comp.

Titus County

S. Rotondi's No. 1 Lillianstun, 1,200 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N. but in W. H. Crawford Sur., 5 miles NE of Talco.
Elev. 301 ft.; derrick.

Van Zandt County

J. Beren et al's No. 1 Bryant, 483 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
S.D. 1,325 ft.; W.O.S.R.

Beren et al's No. 2 Palmer, 544 ft. from S and 686 ft. from E of 69.5-ac. tract, Nacogdoches County School Land.
T.D. 1,324 ft.; S.D.

Wood County

Hollandsworth Drlg. Co.'s No. 1 Little Sandy Hunting & Fishing Club, 400 ft. from N and 3,500 ft. E of James Hamblin Sur., 12 miles SE of Mineola.
S.D. 5,084 ft.; repair engine.

CALIFORNIA WILDCATS

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 6 Capitan, Santa Barbara Co.	5- 4-30	1,031	sd. sh. drlg.
Shell Oil Co., No. 7 Capitan, Santa Barbara Co.	5- 4-30	....	bldg. rig
Shell Oil Co., No. 8 Capitan, Santa Barbara Co.	5- 4-30	1,521	sd. sh. drlg.
Shell Oil Co., No. 9 Capitan, Santa Barbara Co.	5- 4-30	....	grade
General Petroleum, No. 15 Capitan, Santa Barbara Co.	32- 5-30	323	suspended
Refugio Oil Co., No. 1 Carreaga, Santa Barbara Co.	31- 5-30	765	sd. sh. drlg.
Shell Oil Co., No. 1 Golets, Santa Barbara Co.	10- 4-29	2,994	rd. sd. drlg.
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	3,361	O.S. drlg.
Barnsdall-Rio Grande, No. 12 Elwood, S. Barbara Co.	tideland	5,900	rd. sd. drlg.
Barnsdall-Rio Grande, No. 18 Elwood, S. Barbara Co.	tideland	3,051	sd. sh. drlg.
Barnsdall-Rio Grande, No. 2 Elwood, S. Barbara Co.	15- 4-29	6,492	redrlg. 4,453
Bankline Oil Co., No. 10 Elwood, Santa Barbara Co.	tideland	3,835	redrlg. 1,290
Spalding, Caroline, No. 11 Elwood, Santa Barbara Co.	tideland	....	rigging up
Signal Oil & Gas Co., No. 5 Elwood, Santa Barbara Co.	tideland	2,417	sd. sh. drlg.
Pacific Western, No. 15 Elwood, Santa Barbara Co.	tideland	3,865	P.B. 3,740
Union Oil Co., No. 4 Santa Maria, Santa Barbara Co.	16-10-34	815	redrlg. 798
Freeman, M. J., No. 1 Purisima, Santa Barbara Co.	11- 7-33	1,264	br. sh. drlg.
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	8,116	cleaning out
Union Oil Co., No. 1 Bardsdale, Ventura Co.	12- 3-20	3,830	sd. sh. drlg.
Monticello Oil Co., No. 1 Bardsdale, Ventura Co.	12- 3-20	2,875	gr. sd. drlg.
Texas Co., No. 1 Fillmore, Ventura Co.	29- 4-19	1,898	hd. sd. drlg.
Bankline Oil Co., No. 1 South Mountain, Ventura Co.	3- 3-19	598	sd. sh. drlg
Texas Oil Co., No. 1 South Mountain, Ventura Co.	4- 3-19	7,423	P.B. 4,370
Paloma Oil Co., No. 1 Susana, Ventura Co.	12- 2-18	2,690	suspended
Hull, James, No. 1 Susana, Ventura Co.	2- 2-18	476	hd. sd. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	4,743	hd. sd. drlg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	8,924	swab. water
General Pet., No. 1 Oxnard, Ventura Co	26- 2-23	5,674	sd. sh. drlg.
Continental Oil Co., No. 4 San Miguelito, Ventura Co.	23- 3-24	6,537	hd. sd. drlg.
C. C. M. Oil Co., No. 1 San Miguelito, Ventura Co.	23- 3-24	10,030	redrlg. 7,465
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	5,773	sd. sh. drlg.
Cumberland Oil Co., No. 1 Devil's Den, Kern Co.	17-26-18	3,263	cleaning out
Continental Oil Co., No. 2 McDonald, Kern Co.	18-28-20	1,783	P.B. 1,556
Belmac Drlg. Co., No. 1 McKittrick, Kern Co.	22-29-21	3,680	sd. sh. drlg.
Big McKittrick Oil Co., No. 1 McKittrick, Kern Co.	30-30-22	922	sd. sh. drlg.
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Standard Oil Co., No. 2-A North Belridge, Kern Co.	36-27-30	8,501	cmtd. 8,159
Standard Oil Co., No. 3 North Belridge, Kern Co.	36-27-20	4,927	sd. sh. drlg.
Belridge Oil Co., No. 32-35 North Belridge, Kern Co.	35-27-20	7,998	br. sh. drlg.
Belridge Oil Co., No. 33-35 North Belridge, Kern Co.	35-27-20	7,696	br. sh. drlg.
Continental Oil Co., No. 6 North Belridge, Kern Co.	36-27-20	4,943	hd. sh. drlg.
Union Oil Co., No. 19 North Belridge, Kern Co.	36-27-20	6,884	br. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	6,696	br. sh. drlg.
Ohio Oil Co., No. 1 Maricopa Flats, Kern Co.	11-11-22	1,696	sd. sh. drlg.
Woods & Bailey, No. 1 McFarland, Kern Co.	16-26-26	800	cmtd. 782
Republic Pet. Co., No. 1 McFarland, Kern Co.	20-26-27	1,797	sd. sh. drlg.
Standard Oil Co., No. 1 Delano, Kern Co.	1-25-23	2,455	gas; shut in
Standard Oil Co., No. 2 Delano, Kern Co.	1-25-23	3,256	gas; shut in
Standard Oil Co., No. 4 Delano, Kern Co.	34-24-23	2,460	gas; shut in
Standard Oil Co., No. 5 Delano, Tulare Co.	33-24-23	....	grading
Trico Oil & Gas Co., No. 1 Delano, Kern Co.	3-25-23	2,525	gas well
Trico Oil & Gas Co., No. 3 Delano, Kern Co.	36-24-22	4,835	suspended
Trico Oil & Gas Co., No. 5 Delano, Kern Co.	3-25-23	2,467	gas well
Richardson & Heaston, No. 1 Kern Front, Kern Co.	5-28-28	....	rigging up
Carrec Oil Co., No. 1 Kern Front, Kern Co.	10-28-27	380	sd. sh. drlg.
National Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	....	rigging up
Kern River Oilfields, No. 4 Kern Front, Kern Co.	25-28-27	2,055	pump. 250 b.d.
Associated Oil Co., No. 3 Kern Front, Kern Co.	4-28-27	2,608	completing
Associated Oil Co., No. 4 Kern Front, Kern Co.	4-28-27	....	rig, suspended
Associated Oil Co., No. 5 Kern Front, Kern Co.	4-28-27	....	bldg. rig
C. C. M. Oil Co., No. 5 Kern Front, Kern Co.	23-28-27	2,195	pump. 420 b.d.
Bishop Oil Co., No. 2 Kern Front, Kern Co.	26-28-27	....	location
Republic Petroleum, No. 4 Kern Front, Kern Co.	24-28-27	1,966	flow. 400 b.d.
Republic Petroleum, No. 5 Kern Front, Kern Co.	24-28-27	....	rigging up
Standard Oil Co., No. 3 Kern Front, Kern Co.	5-28-27	2,510	cmtd. 2,420
Barnsdall Oil Co., No. 4 Mountain View, Kern Co.	32-30-29	5,801	reaming
Barnsdall Oil Co., No. 5 Mountain View, Kern Co.	32-30-29	....	bldg. rig
Canal Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	4,141	sd. sh. drlg.
C. C. M. Oil Co., No. 1 Mountain View, Kern Co.	11-30-28	6,598	sd. sh. drlg.
Hogan Pet. Co., No. 6 Mountain View, Kern Co.	29-30-29	....	rigging up
Hogan Pet. Co., No. 7 Mountain View, Kern Co.	4-31-29	....	grading
Hogan, Dana, No. 1 Mountain View, Kern Co.	32-30-29	3,957	sd. sh. drlg.
Union Oil Co., No. 8 Mountain View, Kern Co.	23-30-28	7,530	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	1,160	cmtd. 1,159
Mohawk Oil Co., No. 12 Mountain View, Kern Co.	30-30-29	5,463	cleaning out
Mohawk Oil Co., No. 13 Mountain View, Kern Co.	30-30-29	1,571	sd. sh. drlg.
Mohawk Oil Co., No. 14 Mountain View, Kern Co.	30-30-29	....	rigging up
Shell Oil Co., No. 3 Mountain View, Kern Co.	32-30-29	3,428	sd. sh. drlg.
Shell Oil Co., No. 4 Mountain View, Kern Co.	32-30-29	1,281	sd. sh. drlg.
Standard Oil Co., No. 10 Mountain View, Kern Co.	25-30-28	5,372	sd. sh. drlg.
Standard Oil Co., No. 11 Mountain View, Kern Co.	13-30-28	5,097	O.S. drlg.
Standard Oil Co., No. 12 Mountain View, Kern Co.	24-30-28	....	bldg. rig
Standard Oil Co., No. 13 Mountain View, Kern Co.	25-30-28	....	rigging up
Wood-Callahan Oil Co., No. 1 Mountain View, Kern Co.	25-30-28	5,787	sd. sh. drlg.
Mountain View Oil Co., No. 1 Mountain View, Kern Co.	25-30-28	5,650	cleaning out
United Expl. Co., No. 1 Bakersfield, Kern Co.	23-30-27	3,784	gr. sd. drlg.
Jergins Trust, No. 10 Edison, Kern Co.	13-30-29	171	sd. drlg.
Shell Oil Co., No. 9 Edison, Kern Co.	16-30-29	101	sd. drlg.
Monterey Expl. Co., No. 8 Edison, Kern Co.	14-30-29	765	sd. sh. drlg.
Sunday, G. M., No. 1 Edison, Kern Co.	5-30-30	501	suspended
Union Oil Co., No. 1 Edison, Kern Co.	13-30-29	1,234	cmtd. 1,071
Union Oil Co., No. 2 Edison, Kern Co.	13-30-29	....	rig, suspended
General Pet., No. 7 Edison, Kern Co.	14-30-29	1,904	cmtd. 1,755
General Pet., No. 8 Edison, Kern Co.	24-30-29	....	rig, suspended
Appling, C. E., No. 1 Edison, Kern Co.	4-30-29	3,700	reaming
Berry Oil Co., No. 1 Edison, Kern Co.	10-30-29	4,288	P.B. 1,955
Bauer, J. H., No. 1 Edison, Kern Co.	21-30-29	....	grade
Seeple, J. O., No. 1 Elk Hills, Kern Co.	5-30-24	4,900	fish. bit
General Pet., No. 1 Arvin, Kern Co.	1-32-29	7,491	sd. sh. drlg.
Hall-Baker Co., No. 1 Arvin, Kern Co.	16-31-30	1,276	suspended
Hall-Baker Co., No. 3 Arvin, Kern Co.	21-31-30	1,916	will dpn.
Hutcheson & Osborne, No. 2 Arvin, Kern Co.	32-30-30	....	grading
Arlington Prop, Corp., No. 1 Buttonwillow, Kern Co.	6-28-23	3,224	will dpn.
Texas Co., No. 1 Buttonwillow, Kern Co.	6-28-23	2,435	cmtd. 2,330
Superior Oil Co., No. 1 Semi-Tropic, Kern Co.	23-27-23	2,418	gas; shut in
Superior Oil Co., No. 2 Semi-Tropic, Kern Co.	34-27-24	1,194	sd. sh. drlg.
Fullerton Oil Co., No. 1 Semi-Tropic, Kern Co.	1-27-22	2,291	gas; shut in
Fullerton Oil Co., No. 2 Semi-Tropic, Kern Co.	14-27-23	2,463	gas; shut in
Fullerton Oil Co., No. 3 Semi-Tropic, Kern Co.	9-27-23	3,150	gas; shut in
Fullerton Oil Co., No. 4 Semi-Tropic, Kern Co.	26-27-23	2,395	gas; shut in
Fullerton Oil Co., No. 5 Semi-Tropic, Kern Co.	8-27-25	2,347	gas; shut in
Fullerton Oil Co., No. 6 Semi-Tropic, Kern Co.	25-27-23	2,441	gas; shut in
Fullerton Oil Co., No. 7 Semi-Tropic, Kern Co.	25-27-23	2,437	producing gas
Fullerton Oil Co., No. 8 Semi-Tropic, Kern Co.	25-27-23	....	rig mtl.
Fullerton Oil Co., No. 9 Semi-Tropic, Kern Co.	26-27-23	2,431	producing gas
Fullerton Oil Co., No. 10 Semi-Tropic, Kern Co.	15-27-23	2,414	producing gas
Fullerton Oil Co., No. 11 Semi-Tropic, Kern Co.	14-27-23	3,487	sd. sh. drlg.
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-27-23	3,200	producing gas
Standard Oil Co., No. 2 Sem'-Tropic, Kern Co.	5-27-23	4,484	bl. sd. drlg.
Standard Oil Co., No. 3 Semi-Tropic, Kern Co.	7-27-23	2,355	producing gas
Standard Oil Co., No. 4 Semi-Tropic, Kern Co.	9-27-23	3,750	sd. sh. drlg.
Standard Oil Co., No. 5 Semi-Tropic, Kern Co.	9-27-23	4,250	suspended
Standard Oil Co., No. 6 Semi-Tropic, Kern Co.	8-27-23	2,361	producing gas
Standard Oil Co., No. 7 Semi-Tropic, Kern Co.	1-27-22	3,353	form. test
Standard Oil Co., No. 8 Semi-Tropic, Kern Co.	12-27-22	2,426	producing gas
Standard Oil Co., No. 9 Sem'-Tropic, Kern Co.	1-27-23	....	bldg. rig
Standard Oil Co., No. 10 Semi-Tropic, Kern Co.	17-27-23	3,281	sd. sh. drlg.
Standard Oil Co., No. 11 Semi-Tropic, Kern Co.	20-27-24	....	rig, suspended
Standard Oil Co., No. 12 Semi-Tropic, Kern Co.	30-27-24	....	rigging up
Standard Oil Co., No. 13 Semi-Tropic, Kern Co.	6-27-23	....	location
Standard Oil Co., No. 14 Semi-Tropic, Kern Co.	36-27-23	....	location
Standard Oil Co., No. 15 Semi-Tropic, Kern Co.	16-27-23	....	location
Milham Expl. Co., No. 1 Semi-Tropic, Kern Co.	15-27-23	3,122	gas; shut in
Milham Expl. Co., No. 2 Semi-Tropic, Kern Co.	15-27-23	2,429	gas; shut in
Milham Expl. Co., No. 3 Semi-Tropic, Kern Co.	15-27-23	....	rigging up
Milham Expl. Co., No. 4 Semi-Tropic, Kern Co.	24-27-23	....	bldg. rig
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	2,128	sd. sh. drlg.
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-32-25	8,562	hd. sd. drlg.
Ohio Oil Co., No. 2 Buena Vista, Kern Co.	32-31-26	4,675	sd. sh. drlg.
Silver Gate Oil & Gas Co., No. 1 Tejon, Kern Co.	7-10-19	1,485	recmtd. 1,295
Hall-Baker Co., No. 1 Tejon, Kern Co.	12-11-19	1,975	sd. sh. drlg.
Taft Well Drlg. Co., No. 1 Kreyenhagen, Fresno Co.	33-22-16	3,980	sd. sh. drlg.
Pacific Expl. Co., No. 1 Kreyenhagen, Fresno Co.	17-21-17	795	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	fish D.P.
K.N.D.A., No. 54 Kettleman North, Fresno Co.	24-21-16	7,473	br. sh. drlg.
Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	28-23-19	7,628	cleaning out
Pet. Sec., No. 1 Kettleman Middle, Kings Co.	30-23-19	4,100	sd. sh. drlg.
Continental Oil Co., No. 1 Kettleman-South, Kern Co.	7-25-20	7,420	cmtd. 7,350
Farrel Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,880	sd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,687	suspended
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings	21-22-20	2,210	gas well
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	710	suspended
Dudley Ridge Dev. Co., No. 1 Dudley Ridge, Kings Co.	24-23-20	1,300	cleaning out
Amerada Pet., No. 1 F.L.D., San Joaquin Co.	15- 2-5	6,875	sd. sh. drlg.
Amerada Pet., No. 2 F.L.D., San Joaquin Co.	15- 2-5	4,062	gas; shut in
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,462	gas; shut in
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	4,919	reaming
Shell Oil Co., No. 1 Branch, Monterey Co.	34-20-10	4,642	sd. sh. drlg.
Youngblood, C., No. 1 Ducor, Tulare Co.	31-23-28	....	rigging up

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 1 El Segundo, Los Angeles Co.	18- 2-14	7,405	completing
Larco Oil Co., No. 1 El Segundo, Los Angeles Co.	12- 2-15	4,491	sd. sh. drlg.
Associated Oil Co., No. 4 Inglewood Deep, Los Angeles	7- 2-14	4,458	P.B. 3,080
Standard Oil Co., No. 7 Inglewood Deep, Los Angeles	17- 2-14	3,712	pump. 175 b.d.
Standard Oil Co., No. 9 Inglewood Deep, Los Angeles	8- 2-14	2,700	cmtd. 2,645
Allied Pet., No. 1 Del Rey, Los Angeles Co.	28- 2-15	6,709	swabbing
Blackline Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,634	suspended
Crest Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	5,395	sd. sh. drlg.
Lucas, Andrew, No. 1 Del Rey, Los Angeles Co.	35- 2-15	5,830	sd. sh. drlg.
Red Seal Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,455	suspended
Mathews Pet. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,543	cleaning out
Birch Royer Oil Co., No. 1 Del Rey, Los Angeles Co.	34- 2-15	6,523	redrlg. 6,431
Joyce Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,742	P.B. 6,675
Royalty Serv. Corp., No. 4 Del Rey, Los Angeles Co.	27- 2-15	6,460	redrlg. 5,980
Anglo American Oil Co., No. 1 Del Rey, Los Angeles	27- 2-15	5,131	sd. sh. drlg.
Union Oil Co., No. 15 Del Rey, Los Angeles Co.	27- 2-15	6,108	sd. sh. drlg.
Union Oil Co., No. 16 Del Rey, Los Angeles Co.	27- 2-15	....	rigging up
Del Rey Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,202	flow. 821 b.d.
Treasure Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	3,845	sd. sh. drlg.
Vance Dev. Co., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,817	suspended
Eyer Pet. Co., No. 1 Torrance, Los Angeles Co.	26- 4-13	....	rigging up
Monarch Oil Corp., No. 1 Topanga, Los Angeles Co.	5- 1-16	265	hd. sd. drlg.
Texas Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,296	hd. sd. drlg.
Texas Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	2,920	hd. sd. drlg.
Universal Consd., No. 3 Montebello, Los Angeles Co.	5- 2-11	4,464	sd. sh. drlg.
Universal Consd., No. 4 Montebello, Los Angeles Co.	5- 2-11	3,000	sd. sh. drlg.
Woodward Oil Co., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,167	pump 140 b.d.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	5,197	hd. sd. drlg.
Wilshire Oil Co., No. 2 Montebello, Los Angeles Co.	4- 2-11	....	rigging up
Frontier Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	4,852	sd. sh. drlg.
Hover, Arron, No. 1 Pico, Los Angeles Co.	9- 2-11	....	bldg. rig
York Oil Co., No. 1 Brea, Los Angeles Co.	1- 2-10	....	location
Pressel & Tull, No. 1 Puente, Los Angeles Co.	30- 2-9	4,500	sd. sh. drlg.
Fraser, N. M., No. 1 Saugus, Los Angeles Co.	31- 4-16	397	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	1,525	sd. sh. drlg.
Domain Dev. Co., No. 1 Trabuco, Orange Co.	3- 6-7	921	sd. sh. drlg.
Huntington Cent. Oil Co., No. 1 Newport, Orange Co.	29- 6-10	....	rig, suspended
Viking Oil Co., No. 1 Richfield, Orange Co.	29- 3-9	3,870	sd. sh. drlg.
Hillman & Long, No. 1 San Juan, San Bernardino Co.	2- 3-8	850	sd. sh. drlg.
Tehama Pet. Co., No. 1 Chino, San Bernardino Co.	32- 2-8	2,810	sd. sh. drlg.

S. W. TEXAS WILDCATS

Week Ending August 31

Atacosta County

Robert McIntyre's No. 1 Billimek, 1,144 ft. SW line, 2,700 ft. SE line, J. D. Woodruff Sur. No. 246.
Location.

Don Megahan's No. 2 Donna, Farms Co. 15,000 ft. W line, 8,200 ft. S line, Barbara Sanchez Sur.
Drlg. shale 2,642 ft.

Bandera County

Plateau Oil Co.'s No. 1 Garrison, G.C.&S. F. Sur. No. 506, 1,500 ft. from W and 2,970 ft. from N lines of survey.
Drlg. 3,916 ft.; hard shale and sand.

Palm Winn Oil Co.'s No. 1 Watson, 600 ft. N of center line, Sur. 71 (workover).
Drlg. 2,041 ft.

Bastrop County

Joe Mills et al's No. 1 American National Bank of Austin, R. Gage Sur., 150 ft. NE line, 2,300 ft. SE line of survey.
Coring 1,800 ft.

Bee County

G. M. Church's No. 1 J. C. Woods, 330 ft. from N line, 330 ft. W of road, J. Ryan Sur., H.&G.N.R.R., Abstract 186.
Drlg. 5,816 ft.

Grisham et al's No. 1 Ansberger, 330 ft. of S and W lines of 185-ac. tract, Sec. 1, Sand 4,166-85 ft.; dry and abd.

F. P. Hynes' No. 1 Plummer, 990 ft. S line, 330 ft. W line, Sec. 32, F. J. Chessman Sur.
Comp.; gas well; T.D. 2,991 ft.; rock pressure 750 lbs.

F. P. Hynes' No. 2 Plummer, F. J. Chessman Sur. 1, 40 ft. W of No. 1.
No report.

D. V. Smith et al's No. 1 Atkins, M. M. Wood Sur.
Rigging up; standing.

Bexar County

Cherokee Drlg. Co.'s No. 1 Chapman, 2,100 ft. from S line, 3,200 ft. from E line, A. J. Leslie Sur.
S.D. 400 ft.

Fay Chew's No. 1 Jones, 1,650 ft. E line, 150 ft. N line, A. Thompson 10-ac. tract, Jacinto Pena Sur. No. 9.
Standing; sandy shale; T.D. 720 ft.

Fay Chew's No. 2 Jones, 1,025 ft. E line, 150 ft. N line, A. Thompson 10-ac. tract, Jacinto Pena Sur. No. 9.
Set csg. 658 ft.; W.O.C.

Fay Chew's No. 5 Jones, Sec. 9, Pena Sur., 1½ miles E of Adkins.
No report.

Jas. B. Cunningham's No. 1 L. F. Ridder, 950 ft. S of Nelson Road, 1,300 ft. from E line, Block 5,196, Sur. No. 53.
T.D. 520 ft.; moving in material.

Dorine Oil Co.'s No. 2 Tudyk, 600 ft. E line, 400 ft. S line, Blk. 4.
T.D. 760 ft.; P.B. 610 ft.; to test at 575 ft.; W.O.C.

Dunham & McClure's No. 1 S. A. Sewer Pipe Co., 600 ft. S line, 330 ft. W line, 53-ac. tract, E. Brown Sur.
T.D. 2,517 ft.; dry and abd.

Joe Dupree's No. 1 R. S. Coffey, 965 ft. SW line, 910 ft. SE line lease, Rodriguez Sur.
Location.

C. J. LeComte's No. 1 Herbst, 150 ft. out of SW cor. of Manuel Leal Sur.
T.D. 370 ft.; wtr. sand; S.D.

McPhee & Briggs' No. 1 F. Lamb, 9,200 ft. from S line, 800 ft. from W line of Sur. No. 3 (Manuel de Luna).
T.D. 2,327 ft.; fishing for baller; 150 ft. oil standing in hole.

Mid-Texas Prod. Co.'s No. 1 C. G. Walker, 330 ft. out of NE cor. Lot 21, S. M. Dobie Sur. No. 79.
Setting csg. 1,800 ft.

Morgan & Magna's No. 1 Kirkwood, Desaque Sur., 9 miles SW of San Antonio.
Location.

J. H. Parker's No. 1 McCloskey, 150 ft. W line, 1,525 ft. N line, tract, Desaque Sur.
T.D. 530 ft.; S.D.

Carroll C. Raborn's No. 1 Claude McCauley, 150 ft. from N and NW lines of tract in Sec. 52, Wm. Harrison Sur.
T.D. 950 ft.; standing.

G. C. Richardson's No. 1 Russell, 1,000 ft. E line, 140 ft. S line Rodriguez Sur.
T.D. 1,635 ft.; chalk; tested dry.

Blanco County

H. R. Roe and W. E. Nixon's No. 1 Polk Morrisey, 2,000 ft. from W line, 1,000 ft. out of SE cor., 1,600 ft. from N line of Thomas H. Webb Sur. No. 91.
T.D. 370 ft.; lime; S.D.

Caldwell County

J. J. Elanis' No. 1 Brown, 450 ft. SE and SW lines of lease, Souvereign Sur.
Derrick.

Cameron County

Joseph Anderson's No. 1 Browne, Blk. 379, San Benito Subd., Espirito Santo grant, 3 miles N Rio Hondo.
Drlg. 320 ft.

Kingwood & Daniels' No. 1 Port Isabel.
Location.

Dewitt County

Reginald F. Baurke's No. 1 W. C. Steinman Est., 937 ft. from N and S lines, Uriah Blue 1-3 League.
Drlg. 900 ft.

D. G. Glaspier's No. 1 Schuebel, 330 ft. from S and W lines of tract, Fitzgerald grant.
Spudded in; S.D.

Dimmit County

Diamond Half Oil Co.'s No. 1 Eardley Est., 2,390 ft. SW line, 330 ft. NW line, E. A. McCorquodale Sur. No. 6.
Moving in material.

Joe Lundin's No. 1 Nueces Sand, 330 ft. NE line, cor. Lot 16, Blk. 7.
Location.

Duval County

Allen and Morris' No. 1 Diss, 330 ft. N and W lines, NE¼ Sur. 665.
Drlg. 2,386 ft.

Atkins & O'Neill's No. 1 Clara Driscoll Sevier, 2,640 ft. from N, E and W lines of Sec. 7, T.&N.O. R.R. Co. Sur.
Spudded.

J. H. Chandler's No. 1 Rita Pena, 1,325 ft. of NW line, 3,825 ft. of SW line, Share 4, Mesquite grant.
No report.

Magnolia Pet. Co.'s No. 1 D.C.R.C., 330 ft. from S & E lines of Sur. 100.
T.D. 2,135 ft.; P.B. to 1,956 ft.; swbg.; no oil show.

Marso Oil Co.'s No. 1 E. B. Hag'st, 150 ft. from E line, 330 ft. from N line, Sec. 249, Blk. 8, Beaty, Seale & Seward Sur.
Top Cole 1,449 ft.; drlg. 1,753 ft.

Plymouth Oil Co.'s No. 1 Cuellar, 330 ft. NW and NE lines, Sur. 123.
Drlg. below surface csg.

Stanolind O. & G. Co.'s No. 1 Farmers Life Ins. Co., 2,987 ft. E line, 330 ft. N line, Sur. 416.
T.D. 2,469 ft.; sand 2,431-60 ft.; csg. 2,449 ft.; standing; show oil.

Santa Clara Oil Co.'s No. 1 Sevier, C Blk. 70, T.&N.O. Sur.
Drlg. 2,412 ft.

Edwards County

Paul Teas' No. 1 Stewart, C SE¼, Sec. 2, G.C.&S.F. Sur.
Location.

Fayette County

Ross Fenton's No. 1 Kasper (263-ac.), 3,000 ft. from NE line, 1,280 ft. from SW line, of Thos. Green Sur. No. 28.
S.D.

Frio County

W. D. Bacon's No. 1 Burns, 2,500 ft. S and W line, Thomas Clifton Sur.
Moving in material.

Goliad County

Hendricks et al's No. 1 Gillette, 330 ft. of NW and SW lines of tract, G. Gomez Sur.
Location.

Keystone Royalty Co.'s No. 1 M. Woods, SW part of county, 15,000 ft. from SW line, 5,000 ft. from NW line of J. Sherman Sur.
T.D. 5,960 ft.; fishing for core barrel.

Sun Oil Co.'s No. 1 Scarborough, 1,520 ft. SE No. 3, Sec. 25, Talley & B.B. Sur.
Drlg. 3,012 ft.

Gonzales County

S. W. Forrester Oil Co., Inc.'s No. 1 Stein, 475 ft. of SW line, 1,033 ft. of SE line, 311-ac. tract, Bane Sur.
Set surface csg.; S.D.

Interallied Pet. Co.'s No. 1 Wells, 175 ft. SW line, 1,033 ft. SE line, 311-ac. tract, Bane Sur.
S.D. 150 ft.

Resource Prod. Corp.'s No. 1 Sanbeck, 708 ft. NW line, 1919 ft. SW line, Salinas Sur.
Spudded in; S.D.

Guadalupe County

J. E. Clark's No. 1 Larison, 150 ft. E line road, Davis Sur.
Location.

Grace et al's No. 1 Okletree, 400 ft. SE line, 1,600 ft. SW line, 404-ac. tract, Robert Smith Sur. No. 15.
Redrlg. old well; T.D. 2,245 ft.; S.D.

Bob Gode et al's No. 1 Hicks, 1,320 ft. from E line, 150 ft. from S line of 189-ac. tract in Santo Y Coy Sur.
T.D. 1,258 ft.; standing.

J. Harper's No. 1 Fluther, 220 ft. NE line (Creek), 150 ft. NW line tract, Robert Smith Sur. No. 15.
T.D. 200 ft.; S.D.

Inter-Allied Pet. Co.'s No. 1 Wells, 1,708 ft. NE line, 175 ft. SW line, Sec. 2, 80-ac. tract, Sur. 3.
Location.

R. C. Robbins' No. 1 Manford, 1,200 ft. E line, 750 ft. S line, tract, Hodges Sur.
Location.

W. T. Scrutchin's No. 1 A. H. Smith, 150 ft. from E line, 1,350 ft. from N line of 24.5-ac. tract, Jas. B. Cowan Sur.
T.D. 835 ft.; S.D.

J. S. Suttle's No. 2 Baenziger, S of Seguin, Washing to bottom; T.D. 1,500 ft.

Suttle et al's No. 1 Baenziger, 700 ft. from S line, 500 ft. from E line of 125-ac. tract, Monsola Sur.
Set csg. 1,820 ft.; drlg. plugs.

Hidalgo County

Downey & Morton's No. 1 Daskom, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
T.D. 4,115 ft.; swabbing.

Maddox & Walter's No. 1 John H. Sharp, 308 ft. from SE line, 440 ft. from SW line of Blk. 21, Porcion 58.
No report.

Mundy & Son's No. 1 Guerra, 852 ft. from W line, 1,275 ft. from N line of Tract 12, Porcion 41.
Coring 2,763 ft.

Sloan et al's No. 1 Brock & Showers, 250 ft. S and W lines, Lot 9, Blk. 16, Por. 80.
Drlg. 1,667 ft.

Jim Hogg County

Macon Pet. Co.'s No. 1 Gomez, 990 ft. S line, 330 ft. W line, Sur. 105.
Derrick.

Miller & Pippin's No. 1 Yeager, 527 ft. S line, 150 ft. E line of Blk. 6, Sur. 20.
Fishing 3,630 ft.

A. W. Phillips' No. 1 Allen, 660 ft. from S and E lines of Blk. 293, Pippin Subd. of the Randado grant.
T.D. 42 ft.; S.D.

G. C. Hankin et, NW cor. Lot 6, Sec. 5.
Drlg. 63 ft.

Karnes County

Gas Oil Co.'s No. 3 Radford, 404 ft. NW line, 1,650 ft. NE line, Nichols Sur.
Drlg. 1,020 ft.

Marta Pet. Co.'s (Harris & Jecker), No. 1 Cochran, 150 ft. from S line, 360 ft. from E line, McConnel League.
Drlg. 232 ft.

Harry Sample's No. 1 Seeger, 330 ft. from W line, 330 ft. SW of road, J. Pointevent Sur.
S.D. 3,008 ft.

R. G. Tonkin's No. 2 Henke, 3,670 ft. from SW cor., 330 ft. from W line (location changed).
Location.

Kendall County

J. C. Freeman's No. 1 J. M. Gerffers, 1,200 ft. out of SW cor. of 119-ac. tract, Mara Hodgson Sur., Sec. 796.
T.D. 102 ft.; S.D.

Southwestern Dev. Co.'s No. 1 Werner, 765 ft. W line, 1,645 ft. N line, J. F. Torrey Sur. No. 781.
Set 8-in. csg. 580 ft.; T.D. 668 ft.; S.D.

Kerr County

Eastland Oil Co.'s No. 5-E Love, 1,580 ft. E line, 300 ft. N line, Sur. 1,591.
Set csg. 5,623 ft.; standing.

Kleberg County

Harry Clark's No. 1 Rodgers, Lot 5, Blk. 36.
S.D. 750 ft.

Fidelity & Culbertson Exploration Co.'s No. 1 Kivlin, Blk. 39, Lot 4, K.T.&I. Sur.
Location.

Fidelity Expl.'s No. 1 Henry, Lot 2, Sec. 49, K.T.&O. Sur.
T.D. 3,027 ft.; P.B.; perforated 2,642-48 ft.; testing.

Fidelity Oil Co.'s No. 1 Flats, 150 ft. S and E lines, Blk. 14, Sec. 40, K.T.&I. Sur.
Location.

Parr & Ponder's No. 1 Sam Michalk et al, 330 ft. from N line and 775 ft. from S line, Blk. 37, Sec. 5; 5 miles SE Kingsville.
T.D. 2,900 ft.; S.D.

Live Oak County

Aransas Oil Co.'s No. 1 Reed, 330 ft. E line, 1,320 ft. S line, Spicer Sur. No. 70.
Drlg. 797 ft.

E. H. Buchner's No. 1 McNeill, 300 ft. of SW cor. of 40-ac. tract, Blk. 8, McNeill Subd.
Location.

Earl Calloway's No. 1 Lyne, 895 ft. of W line, 330 ft. of N line, SW¼ SW¼ of M. M. Lyne Sur.
Location.

Earl Calloway's No. 1 George West estate, Sec. 255, H.S.&F. Sur.
Sand 4,018-29 ft.; D.S. test at 3,995-4,029 ft.; showed 8 thribbles S.W. with trace of oil; no pressure; coring 4,107 ft.

Conway & Buescher's No. 1 Sanger, 330 ft. N of center of NW line of Sur. 224 in Sur. 383.
Spudding in.

Henderson Coquat's No. 1 Reagan, McGloin Sur., E of Nueces River and S of Oakville.
Drlg. 4,112 ft.

Lucky Strike Oil Co.'s No. 1 Sails, 150 ft. SE cor., Blk. 114, Scrugham Sur.
Set surface csg.; W.O.C.

G. A. Pinkley's No. 1 Jacob Corp., NE¼ SE¼ Sec. 3, G.H.&H. Sur.
Drlg. 407 ft.

Maverick County

Thompson & Shearer's No. 1 Wipff, 330 ft. W line, 1,800 ft. S line, Sec. 18.
Drlg. 233 ft.

McMullen County

Aransas Oil Co.'s No. 1 Reed, 330 ft. E line, 1,320 ft. S line, Spicer Sur.
No report.

Bussa Oil Co.'s No. 1 F. B. Horton, center of E½ of NW¼ of S 640-ac. of J. M. Jean Sur. No. 29.
Drlg. 760 ft.

Carruth & Hagen's No. 1 Lange, 1,900 ft. W line, 330 ft. N line tract, Wm. Haley Sur.
Drlg. 780 ft.

J. O. Gibson's No. 1 G. C. West (Lowe), 150 ft. E line, 1,200 ft. S of NW cor. of Lot 1, Blk. 4, H.T.&B. Sur.
S.D. 465 ft.

Howard & Carpenter's No. 1 Jungman, 1,030 ft. from E line, 950 ft. from S line, Hely Sur.
S.D. 1,205 ft.

Chas. A. Hall's No. 1 B. C. Claunch, 368 ft. from N line, 160 ft. from E line of 25-ac. tract, Michael Haley Sur.
Location.

Lucky Strike Oil Co.'s No. 1 Lark, 150 ft. S and E lines, Blk. 114, Scrugham Sur.
No report.

L. D. Ormsby's No. 4 Griffith, 660 ft. N line, 1,360 ft. E line tract, Osborne Sur. 50.
S.D. 125 ft.

L. D. Ormsby's No. 5 Griffith, 330 ft. N line, 1,030 ft. E line, Sur. 50.
Moving in material.

Points et al's No. 1 Fahler, 432 ft. S line, 819 ft. E line of tract, Byrna pasture.
T.D. 1,004 ft.; S.D.

Medina County

F. Brown's No. 1 Brucks, 900 ft. W line, 660 ft. S line, Brucks tract, John Ward Sur.
Drlg. 132 ft.

Cinoco Oil Co.'s No. 2 Roy Taylor, 600 ft. N line, 150 ft. E line, NE¼ W½ Sur. 135.
Moving in material.

Joe Dupree's No. 1 Brucks, 404 ft. N line, 165 ft. E line, Castro Sur. No. 48.
No report.

Joe Dupree's No. 1 Batto, 258 ft. from E line, 957 ft. from N line, J. Ball Sur. No. 1,478.
No report.

Gates & Hill's No. 2 Odem, 1,150 ft. W line, 435 ft. S line, 300-ac. tract, Castro Sur. No. 174.
Drlg. 255 ft.

Letro Oil Corp.'s No. 1 E. B. Forrest, 1,928 ft. from N line, 1,908 ft. from E line of 640-ac. tract, Blk. 69.
Drlg. 235 ft.

Nueces County

La Jita Corp.'s No. 1 King, C SE¼ SW¼ Sec. 22.
Coring 3,457 ft.

N. M. Wilson's No. 1 J. C. Bluntzer, SE cor. of tract, Casa Blanco Grant.
Spudded in.

Real County

H. J. Heartwell et al's No. 2 Mrs. M. S. Perry, 250 varas from NW line, 775 varas from SW line of A.B.&M. Sur. No. 175.
Drlg. sidetracked hole; T.D. 3,220 ft.; S.D.

San Patricio County

Masterson et al's (Tom Graham) No. 1 Wurstach, 330 ft. from W line, 4,350 ft.

50,000 LINE

Safety Switch

built DUST-TIGHT and WEATHER-PROOF for OIL INDUSTRY USE

Dust storms or cloudbursts offer no short circuit hazard when Square D 50,000 Line Switches are on the job. The rugged construction of these switches assures the long service life that will be demanded of them by the oil industry.

Read these outstanding features,—ample wiring space,—rust resistant, cast aluminum, dust-tight, weather-proof box,—quick make and break switch,—interlocked cover,—high rupturing capacity. Specify Square D for your next power or light job.

The compact Square D 50,000 Series is available in 30 to 200 ampers capacity. Switch mechanism double break. Positive pressure type fuse clips. Switch base flash-proof and non-carbonizable.

SQUARE D

COMPANY, INC.

Los Angeles • San Francisco • Denver

SQUARE D COMPANY OF TEXAS

Houston Dallas

from S line of C. C. Hornsby Sur.
Standing 5,521 ft.

Willis Storms' No. 1 Hobbs, 877 ft. S and 47 deg. 30 min. E from W corner of 50-ac. tract, N 42 deg., E 622 ft. to center of tract, Delgado Sur.
Drlg. 1,221 ft.

Starr County

C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E lines of Sec. 6 (NE part of county).
Fishing 3,517 ft.

H. L. Harter's No. 1 Gonzales, 150 ft. N line, 1,250 ft. E line, Blk. 1, Share 62, Por. 71.
Cleaning old hole; T.D. 435 ft.

Nix et al's No. 1 S.C.C.C., 150 ft. from S and W lines of Blk. 58, Jeffries Lambeth Subd.
T.D. 2,830 ft.; dry and abd.

Pedernal Oil Co.'s No. 1 Hicks et al, 187 ft. from NW line, 318 ft. from NE line of Blk. 6, Pedernal Grant.
T.D. 2,210 ft.; S.D.

Pedernal Oil Co.'s No. 1 S. Welsh, 630 ft. NE cor. Blk. 3, Pedernal grant.
No report.

Travis County

C. B. Collard's No. 1 Blomberg, 150 ft. N line, 840 ft. E line, 99-ac. tract, McHenry Windburn Sur.
Drlg. 73 ft.

R. C. Hill's No. 1 S. A. Johnson, 1,473 ft. from SE line, 308 ft. from NE line of 80-ac. tract, John W. Haun Sur.
T.D. 1,100 ft.; T.A.

Bolling & Pew's No. 1 Langren Est., R. E. Lundgren 113-ac. tract, Samuel Kimbro Sur.
S.D. 670 ft.

G. A. Artz & Co.'s No. 1 Rolff, 454 ft. N line, 207 ft. W of tract, Hancock Sur.
T.D. 650 ft., shale; S.D.

J. E. Robertson's No. 1 Smith, 450 ft. NW cor. Lot 16, Kimbro Sur.
Drlg. 665 ft.

Webb County

Austin & Vernon's No. 1 Jeffries, 150 ft. NE line, 1,170 ft. SE line, Blk. 13, Sur. 1,463.
Set surface csg.; S.D.; T.D. 40 ft.

D. E. C. Oil Co.'s No. 1 Slater, C Blk. 50, Sur. 15, Arispe grant.
Location.

Arthur H. Wray's No. 1 Geo. Stuempke, Share 1, Brewster pasture, Galan grant.
S.D. 1,125 ft.; new rig; to deepen.

E. T. Burton's No. 1 Billings, NE cor. of SW¼, Sur. 113.
Location.

J. E. Neal's No. 1 Laurel Bros., 1,320 ft. of S and E lines, Sur. 1,119.
Rigging up.

Willacy County

G. & S. Drlg. Co.'s No. 2 Armendiaz, near Rio Hondo, 7,798 ft. from E and W lines of Share 14.
Cleaning hole.

Kingwood Oil Co.'s No. 1 Santa Rosa, Inc., 160 ft. from E line, 637 ft. from S line of Sec. 30, Blk. 16, Share 44, San Juan de Carricitas grant.
Drlg. 5,647 ft.

Williamson County

H. B. and Otto Glass' No. 1 Albert, 3 miles SE of Taylor.
S.D. 214 ft.; shale.

H. L. Goff et al's No. 1 Albert Klotz, 1,700 ft. from N line, 150 ft. from E line of 100-ac. tract, W. Cartwright Sur.
S.D. 1,250 ft.

Kothmann et al's No. 1 Albert Krueger, John Bevil Sur. No. 56, 1,400 ft. from NW line, 1,060 ft. from SW line, 118-ac. tract.
S.D.; shale 550 ft.

Rue et al's No. 1 Chas. Bachmayer, 6 miles SE Taylor.
T.D. 800 ft.; csg. parted; S.D.

J. M. Russell's No. 4 Nelson Est., 550 vrs. NE line, 150 vrs. SE line, J. L. Justice Sur. No. 2.
T.D. 604 ft.; lime; S.D.

Zapata County

H. F. Crouis' No. 1 Ysagierre, 460 ft. S and W lines, Share 17, Por. 15.
Drlg. 309 ft.

Humble O. & R. Co.'s No. 1 Dominguez, 12,785 ft. NE lines, 1,320 ft. SE line, Por. 31.
Drlg. 4,642 ft., shale.

Kemrow Oil Co.'s No. 1 Santos, 330 ft. NW and SW lines, Share 26, Fausler Partition, Comitas grant.
Drlg. 3,156 ft.; testing.

J. J. O'Hern's No. 1 Vela, Blk. 2, Por. 27.
Location.

Joe Palmer's No. 1 Emma A. Markrud, 150 ft. from NE and NW lines, Blk. 22, Sur. No. 616.
Drlg. 1,270 ft.

S. W. TEXAS PROVEN

Week Ending August 31

Carroll—Bastrop County

Fay Wilson et al's No. 1 Calahan, 7,700 ft. from NW line, 350 ft. from SW line, Mays Sur.
T.D. sandy shale 747 ft.; S.D.

Bateman—Bastrop County

Batts & Jarnson's No. 1 Mrs. Annete Harris, 576 vrs. (1,600 ft.) NW line, 630 vrs. (1,750 ft.) SW line, John Maxmilian Sur. 22.
T.D. 2,300 ft.; fishing for parted tubing.

Caesar—Bee County

Commodor Oil Co.'s No. 4 Grissom, 750 ft. W line, 150 ft. N line, 771.9-ac. tract, McFarley Sur.
Drlg. 220 ft.

El Toro Oil Co.'s No. 1 J. J. Grissom, 150 ft. from N and W lines of 10-ac. tract, P. B. Early Sur.
Spudded; no report.

Luling O. & G. Co.'s No. 3 Hudman, 980 ft. E line, 600 ft. N line, 50-ac. tract.
Set surface csg.; W.O.C.

Luling Oil & Gas Co.'s No. 2 Maley, 680 ft. E line, 150 ft. S line, 35-acre tract.
Comp.; 260 bbls., 3/16-in. choke; sand 3,022-39 ft.

McAllister Fuel Co.'s No. 3 Vaughn, 1,150 ft. E line, 150 ft. N line, lease.
Rigged up.

Swiger et al's No. 4 Gardner, W offset to Vaughn producer.
Moving in material.

Dirks—Bee County

Circle Oil Co.'s No. 1 Harris, 1,650 ft. NW line, 990 ft. NE line, Abst. 1,210, J. L. Dugat Sur.
Dry and abd.; T.D. 4,301 ft.

Dirks et al's No. 5 Roth, 330 ft. N line, 590 ft. E line of lease, Sec. 7.
Drlg. 2,520 ft.

Dirks & Wrightsman's No. 6 Roth, 330 ft. N line, 590 ft. E line, lease, Sec. 7.
Comp.; 5½ bbls. on ½-in. choke; sand 3,855-60 ft.

Heyser, Heard & Walton's No. 8 Young, 390 ft. W of No. 7.
Rigging up.

Humble O. & R. Co.'s No. 2 Shellenberger, 860 ft. N line, 330 ft. W line 162.7-ac. tract, Uranga grant.
Sand 3,874-79 ft.; show oil; reaming to make D.S. test.

Heyser, Heard & Walton's No. 9 Young, 390 ft. W No. 6 Young Rawlins Sur.
Set csg. 3,883 ft.; W.O.C.

Mills Bennett's No. 1-A Harris, 330 ft. NE and NW lines, Lot 6, J. L. Dugat Sur.
Rigged up.

Texas Co.'s No. 5 Young.
Set csg. 3,881 ft.; W.O.C.

Ray—Bee County

Dirks Bros.' No. 3 Ray, 660 ft. E of No. 2 and W road to Pettus in SW¼ of Sec. 7.
1,800 ft.; no report.

L. W. Littlejohn's No. 1 J. B. Borroun, 150 ft. out of SW cor. of 234-ac. tract, Wm. Gell Sur.
Drlg. 1,652 ft.

Simms Oil Co.'s No. 3 Ray, 660 ft. W No. 2 Ray.
Spudded in.

Worth Oil Co.'s No. 3 Rutledge, 150 ft. out of SW cor., 300 ft. S of No. 2, 15-ac. tract, A. Hadley Sur.
Spudded in; S.D.

R. J. Worthington's No. 1 Chestnut, 330 ft. NW cor. 40-ac. tract, B. O. Hadley Sur.
Spudded in; S.D.

Tuleta—Bee County

Highland Oil Co.'s No. 4 Campbell, 40-ac. tract, B.&B. Sur.
Spudded in.

Illinois Pet. Co. et al's No. 1 Rapp, 330 ft. E line, 375 ft. NE line, 106-ac. tract, Dugat Sur.
Rigging up.

Southwest Exploration Co.'s No. 1 Heyden & Bruckham, C of farm tract, 330 ft. from N and W lines of Sec. 20, Uranga grant.
Rigging up.

Sun Oil Co.'s No. 2 Page, 330 ft. SW line, 990 ft. SE line, Young Sur.
Location.

Texas Co.'s No. 6 Young, 660 ft. E of No. 5 Young.
Rigging up.

Von Ormy—Bexar County

Jack Crouch's No. 2 Barragan, 550 ft. SW line, 150 ft. NW line, Juan Barragan 160-ac. tract, J. S. Simpson Sur.
Sand 600-50 ft.; T.D. 696 ft.; running tubing.

Richard Oil Co.'s No. 2 Weilbacher, 162 vrs. E line, 2,650 ft. S line, Mrs. Z. A. Mann 100-ac. tract, S. McCulloch, Jr. Sur. 54.
Fishing 500 ft.

Umburn & Trawalter's No. 5 Wm. Biel, 450 ft. SW line (river), 150 ft. NW line Wm. Biel 160-ac. tract, John S. Simpson Sur. No. 59.
Drlg. 490 ft.; shale.

Palo Blanco—Brooks County

United Prod. Co.'s No. 1 Kathleen Jones Hocker, 1,300 ft. SW of No. 2, 1,636 ft. from N line of Los Megneijes de Palo Blanco grant.
Fishing 4,251 ft.

Bruner—Caldwell County

Dawn Oil Corp.'s No. 2 Floyd Tiller.
Derrick.

Branyon—Caldwell County

R. S. Boling's No. 2 C. F. Robertson, 575 ft. along Plum Creek from SW cor. of tract, 150 ft. from creek, John Neill Sur.
T.D. 2,230 ft.; D.S. test shows 200 ft. oil in hole; swbng. and washing.

Dunlap—Caldwell County

Ballard & Witting et al's No. 1 Mrs. A. C. Bridges et al, 650 ft. from NW line, 450 ft. from NE line of Soloman Seale Sur.
Fishing 1,995 ft.

Detroit-Texas Dev. Co.'s No. 3 Dunlap Estate, 300 ft. SW line, 1,300 ft. NW line, W. P. Dunlap 105-ac. tract, S. F. Sanders Sur.
Standing 2,320 ft.

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W. T. Walker's No. 3 Walker, 330 ft. SE of No. 2.
1,200 ft.; S.D.

Driscoll—Duval County

Continental Oil Co.'s No. 6-A Sevier, 2,000 ft. W, 1,000 ft. S, No. 5-A Sevier, Sur. 447.
Location.

Government Wells Pool—Duval County

Byrd Oil Co.'s No. 8 Wright, 330 ft. N and E lines, Sur. 101.
Location.

Frank Gravis' No. 1 DeWitt, 330 ft. S and W lines, NE¼ SE¼ Sur. 46.
Coring 2,562 ft.

C. C. Hamil's No. 1 Hahl, 330 ft. E line, 1,724 ft. S line, Sur. 78.
Comp.; 25 bbls. per hr.; sand 2,640-60 ft.

Highland Oil Co.'s No. 1 C. W. Hahl, Sur. 61.
Rigging up.

P. K. Kelly's No. 1 Turney, 200 ft. E line, 1,100 ft. N line, Sur. 8.
Drlg. 400 ft.

Magnolia Pet. Co.'s No. 2-B Hahl, 330 ft. S and E lines, NW¼ NE¼, Sur. 76.
Comp.; 35 bbls. per hr. on ½-in. choke; sand 2,651-80 ft.

Magnolia Pet. Co.'s No. 3 Herbst, 990 ft. W line, 330 ft. S line, Sur. 70.
Comp.; 20 bbls. on pump; T.D. 2,753 ft.

Magnolia Pet. Co.'s No. 1 D.C.R.C., 330 ft. S and E lines, Sur. 100.
Drlg. plugs 2,135 ft.

Magnolia Pet. Co.'s No. 4 Herbst, 990 ft. N line, 330 ft. W line, Sur. 70.
Location.

Parr Oil Corp.'s No. 3 R. E. Glover, 330 ft. from N and E lines of SE¼ of SE¼ of Sec. 44, J. Poitevent Sur.
Location.

Russ Pet. Co.'s No. 3-D Hahl, 990 ft. E line, 330 ft. N line, N½ NE¼ Sur. 64.
Comp.; gas well; sand 2,520-40 ft.; 20,000,000 ft. of gas per day.

Smith & Storey's No. 17 Lundell, 80-ac. tract, Sur. 48.
Drlg. 1,562 ft.

Hoffman—Duval County

Reynosa Oil Co.'s No. 1 Meek, 1,650 ft. N line, 330 ft. E line, Sur. 114.
Location.

Rogers O. & G. Co.'s No. 1 Hoffman, 330 ft. SE line, 2,970 ft. SW line, Sur. 118.
Set csg. 2,554 ft.; W.O.C.

Loma Novia—Duval County

Bridwell Oil Prod. Co.'s No. 2-B Hubbard, 330 ft. W line, 1,650 ft. N line, Sur. 71.
Location.

Bridwell Oil Prod. Co.'s No. 2-B Hubbard, 330 ft. W line, 1,650 ft. N line, Sur. 75.
Comp. at 2,691 ft.; no gauge.

Buchanan & Blanco Oil Co.'s No. 1-B Ruiz, 185 ft. N line, 1,650 ft. E line, Sur. 73.
Drlg. 1,652 ft.

R. DeLange's No. 2 B.C.C., 330 ft. S and E lines, 120-ac. tract, Sec. 76.
Location.

R. DeLange's No. 1 B.C.C., 1,011 ft. E line, 330 ft. S line, Sur. 76.
T.D. 2,705 ft.; running liner.

Duval Oil Co.'s No. 1 Hubbard, Morris & Cummings Sur., Sec. 77, 330 ft. out of NE cor. NE¼ section.
Rigging up.

Eastern Texas Pet. Co.'s No. 1 Hubbard, 330 ft. N and E line, NW¼ Sur. 71.
Sand 2,726-63 ft.; dry and abd.

Frank Gravis' No. 1 Flodin, 330 ft. from S and E lines of Sur. 61.
T.D. 2,565 ft.; flowing in pits; no gauge.

Frank Gravis' No. 2 Byland, 330 ft. S and E lines, Blk. 2, Sur. 78.
Location.

Claude Hamil's No. 5 Hubbard, 330 ft. W line, 2,970 ft. S line, W½, Sur. 77.
T.D. 2,644 ft.; setting csg.

Claude Hamil's No. 2 Hubbard, 330 ft. W line, 990 ft. N line, W½, Sur. 77.
Comp.; 25 bbls. per hr. on ½-in choke; sand 2,648-65 ft.

Claude Hamil's No. 2 Ruiz, 330 ft. from S and E lines of NW 100-ac. tract, Sur. 41.
Cmtd. csg.; W.O.C.

Highland Oil Co.'s No. 1 Hubbard, NE cor. SE¼ Sur. 75.
Completing.

Humble O. & R. Co.'s No. 4 Vela, 330 ft. W line, 1,176 ft. N line, Sur. 42.
Set surface csg. 132 ft.; W.O.C.
T.D. 2,762 ft.; running to plug and abd.

Chas. Kleiner's No. 1 Ruiz, 1,320 ft. N line, 1,650 ft. E line, Sur. 125.
R.U.; standing.

Shell Pet. Corp.'s No. 4 Hubbard, 2,310 ft. W line, 989 ft. S line, 320-ac. tract, Sur. 77.
Comp.; est. 10 bbls. per hr.; sand 2,758-61 ft.

Shell Pet. Corp.'s No. 5 Hubbard, 320-ac. tract, Sur. 77.
Set surface csg.; W.O.C.

Stieren Oil Co.'s No. 6 Trevino, 990 ft. N and E lines, Sur. 72.
Comp.; 10 bbls. per hr.; T.D. 2,716 ft.

Texas Co.'s No. 8 Vela, 1,650 ft. E line, 330 ft. S line, Sur. 42.
Set csg. 2,710 ft.; W.O.C.

Seven Sisters—Duval County

Atlantic Oil Co.'s No. 1 J. F. Welder, 330 ft. N and W lines, E half Sur. 385.
Comp.; 27 bbls. on ¼-in. choke; T.D. 2,518 ft.

Atlantic Oil Co.'s No. 2 J. F. Welder, 330 ft. W line, 1,000 ft. N line, Sur. 385.
Spudded in.

Henderson-Harney's No. 2 Serna, 330 ft. W line, 990 ft. N line, Sur. 384.
Drlg. 437 ft.

Humble O. & R. Co.'s No. 1-B Serna, 330 ft. S and W lines of lease "B." B.S.&F. Sur.
Sand 2,474-82 ft.; test 1,650 ft. oil 15 min.

Mid-Continent Pet. Corp.'s No. 1 Serna Jr., 330 ft. N of W lines of S½ of N½ Sur. 384.
Location.

Santa Clara Oil Co.'s No. 13 Wood-Welder, 1,650 ft. N line, 330 ft. E line, 160-ac. tract, Sec. 385, J. Poitevent Sur.
Test 1,150 ft. oil in 10 min. at 2,500 ft.

Shell Pet. Corp.'s No. 4 Hubbard, 989 ft. E line, 2,310 ft. S line, Sur. 77.
Set surface csg.; W.O.C.

North Pettus—Goliad

Jane Oil Co.'s No. 4 Smith, 330 ft. SW and SE lines 142.8-ac. tract, B.&B. Sur.
Comp.; 175 bbls.; sand 3,686-95 ft.

Magnolia Pet. Co.'s No. 9 Porter, B.&B. Sur.
Drilled plugs 3,695 ft.; testing.

Sun Oil Co.'s No. 5 Scarbrough, 330 ft. NE line, 660 ft. NW of No. 4, Sec. 25, B.&B. Sur.
Drlg. 3,320 ft.

Darst Creek—Guadalupe County

Burrows et al's No. 1 Lampke, 150 ft. N and E lines, Johns 140-ac. tract, Green DeWitt Sur. No. 13.
Location.

Texas Co.'s No. 2 Posey (workover).
Old T.D. 2,606 ft.; set 7-in. csg. at 2,575 ft.; T.D. of sidetracked hole 2,583 ft.

Mercedes—Hidalgo County

Union Sulphur Co.'s No. 5 American Rio Grande L. & I. Co., 330 ft. N line, 350 ft. W line, Tract 2,082.
Drlg. 5,293 ft.

Union Sulphur Co.'s No. 4 A.R.G.L.&I.C., 400 ft. N and W lines, Lot 1, Blk. 99, 1½ miles SW discovery well.
Coring 7,539 ft.

Union Sulphur Co.'s No. 1 American Rio Grande L. & I. Co., 400 ft. S and W of NE cor. of Lot 229, Blk. 59 (W.O.).
Comp.; 25 bbls. per hr. on ¾-in. choke; sand 7,490-97 ft.

North Pettus—Karnes County

Begol Oil Co.'s No. 7 McKinney, 660 ft. N of No. 6 well.
Comp. on pump; T.D. 3,671 ft.

Weiner—Kendall County

Southwestern Dev. Co. Synd., Ltd.'s No. 1 W. G. Werner, 1,645 ft. from N line, 765 ft. from NW line of 320-ac. tract, J. F. Torrey Sur. No. 781.
675 ft.; underreaming.

Kingsville—Kleberg County

Ray Clark's No. 1 House, Lot 5, Blk. 37, K.T.&I. Co. Sur.
S.D. 1,000 ft.

Fidelity Exploration's No. 1 Paul O. Henry, 150 ft. from N line midway E and W lines of Blk. 2, Sec. 49, K.T.&I. Sur.
2,600 ft.; no report.

Fidelity Exploration Synd.'s No. 1 Vivian Kivlin, Sec. 4, Blk. 39, K.T.&I. Sur. on Vivian Kivlin lease.
Derrick blown down.

Lucas—Live Oak County

Houston Oil Co.'s No. 1 Frederick, 330 ft. NW and SW lines, Sec. 16, Jane Curry Sur. No. 8.
T.D. 5,223 ft.; S.W.; dry and abd.

Houston Oil Co.'s No. 2 Frederick, 330 ft. SW and SE lines, Sec. 19, Jane Curry Sur. No. 16.
Spudded in.

Houston Oil Co.'s No. 3 Frederick, 330 ft. NW and NE lines, Sec. 9, Jane Curry Sur. No. 8.
Drlg. 1,510 ft.

Smith & Storey's No. 1 Dinero townsite, 660 ft. E of No. 1 Frederick, Jane Curry Sur.
Drlg. 200 ft.

Three Rivers—Live Oak County

Benco Oil Corp.'s No. 1 E. Mahoney, 155 ft. from NW line of J. H. Harvey tract, 3,109 ft. SW of highway in Mark Killelly Sur.
S.D. 78 ft.

Jacob Pool—McMullen County

Loma Oil Co.'s No. 4-A Jacob, 660 ft. N of No. 3-A.
Coring 913 ft.

M. E. Young's No. 8-A Cox, E of Frio River across line from Lark tract in M. Hely Sur. (old well).
Sand 1,070 ft.; no report.

Loma Alta—McMullen County

Illinois Pet. Co.'s No. 1 Atkinson, 150 ft. S and E lines, Blk. 114, Scrugham Sur.
T.D. 2,501 ft.; dry and abd.

Loma Oil Co.'s No. 1 Hagist, NE cor. of NW¼ of Sur. 108.
Sand 2,190-92 ft.; 2,215 ft.; no report.

Hondo—Medina County

Callahan & Robert's No. 1 Ray Taylor, 1,450 ft. NS line, 220 ft. EW line, Sur. No. 135.
Drlg. 170 ft.

Saxet—Nueces County

Holliday et al's No. 2-A Smith, Sur. 35.
Set csg. 5,792 ft.; W.O.C.

Holliday et al's No. 2-B Smith, 1,630 ft. W line, 394 ft. cen. Rd., Sur. 35.
Set csg. 4,720 ft.; W.O.C.

Holliday et al's No. 2-A Stillwell, 880 ft. N line, 505 ft. W line, 63-ac. tract, Farm Lot No. B-31.
Sand 4,788-93 ft.; jetting oil and wash wtr.

Houston Oil Co.'s No. 4 Walton, 330 ft. EW line, 1,560 ft. NE line.
Drlg. shale and lime 2,923 ft.; no report.

Houston Oil Co.'s No. 5 Rand Morgan, 330 ft. N line, 1,694 ft. E line, 484.1-ac. tract, Sec. 7, Range 5, R.O. Sur.
Drlg. 2,310 ft.

Kepley Prod. Co.'s No. 2 Donigan, 330 ft. N and W lines 100-ac. tract, Sec. 7, T.D. 4,866 ft.; tested oil; setting liner and screen.

Magnolia Pet. Co.'s No. 3 Baldwin, 660 ft. S of No. 1 Sanders.
Rigging up.

Magnolia Pet. Co.'s No. 2 Baldwin, 330 ft. W and S lines 1,005-ac. tract, B.S.&F. Sur. No. 165.
Testing 2,803-11 ft.

Magnolia Pet. Co.'s No. 2 Sanders, 330 ft. SW cor. 110-ac. tract, Sec. 165, B.S.&F. Sur.
Derrick.

Magnolia Pet. Co.'s No. 2 W. W. Walton, 330 ft. from E line, 289 ft. from S line

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of 92.11-ac. tract, Enrique Villareal Sur. Location.

Republic Oil Co.'s No. 3-A Weil, 330 ft. S and W lines, 100-ac. tract, K.O.&V. Sur.
Comp.; 800 bbls.; sand 4,838-41 ft.

Shell Pet. Corp.'s No. 1 Flato, 330 ft. W line, 500 ft. Tex.-Mex. R.R., 40-ac. tract No. 1, Dunn Sur.
Drlg. 3,620 ft.

Shell Pet. Corp.'s No. 1 Isensee, 330 ft. S and E lines 136-ac. tract, C. Land Sur.
S.D. 1,305 ft.; boiler repairs.

Shell Pet. Corp.'s No. 2 Isensee, 330 ft. S and W lines of 136-ac. tract, C. Land Sur.
Rigging up.

Smith et al's No. 1 Walton, NW cor. 92.11-ac. tract, Enrique Villareal Sur.
Reconditioning and testing.

Southern Minerals' No. 1 Ocker, 330 ft. S line, lease.
Comp.; 625 bbls.; sand 4,862-68 ft.

Southern Minerals Corp.'s No. 6 Ocker, 330 ft. S and E lines, 95-ac. tract, Sec. 8, Sur. 418.
Drlg. 3,650 ft.

Violet Oil Co.'s No. 2 Walton, 330 ft. N and W lines, Sec. 6.
Comp.; 220 bbls.; T.D. 4,862 ft.

Violet Oil Co.'s No. 1 Gallagher, 330 ft. S line, 990 ft. W line, 171-ac. tract, J. H. Smith Sur. 25.
Set surface csg.; W.O.C.

Warner-Quinlan's No. 1 Isensee, 125 ft. S line, 330 ft. W line, Blk. 1.
Spudding in.

Warner-Quinlan's No. 2 Isensee, 330 ft. S and E lines, Blk. 1.
Location.

Plymouth—San Patricio County

Heep Oil Corp.'s No. 4-E Welder, 466 ft. from N line, 1,399 ft. from E line of N 400-ac. tract, Sec. 46, R. Montgomery Sur.
Rigging up.

Heep Oil Corp.'s No. 5-E Welder, Sec. 46.
Rigged up.

Heep Oil Corp.'s No. 7-E Welder, 466 ft. E line, 2,032 ft. S line, Montgomery Sur., Sec. 46.
Comp.; 5⅛ bbls. per hr.; top sand 5,577 ft.; T.D. 5,646 ft.; T.P. 1,820 lbs.

Heep Oil Co.'s No. 8-E Welder, Sec. 46.
Comp.; 11 bbls. per hr.; top sand 5,580 ft.; T.D. 5,654 ft.; T.P. 785 lbs.

Heep Oil Corp.'s No. 9-E Welder, 2,332 ft. N line, 1,399 ft. E line, N 400-ac. tract, Sec. 46, R. Montgomery Sur.
Derrick rigged up.

Heep Oil Corp.'s No. 10-E Welder, 3,265 ft. N line, 1,399 ft. E line, N 400-ac. tract, Sec. 46, R. Montgomery Sur.
Location.

Heep Oil Corp.'s No. 1-F Welder, 466 ft. N and E lines of 200-ac. tract, Sec. 46.
Comp.; est. 200 bbls.; sand 5,620-34 ft.

Heep Oil Corp.'s No. 2-F Welder, 466 ft. S line, 466 ft., Chiltipin Creek, 200-ac. tract, Sec. 46.
Location.

Magnolia Pet. Co.'s No. 2 Corpus Christi, 660 ft. S of No. 1, H. H. Hunter Sur.
Drlg. 5,372 ft.

Plymouth Oil Co.'s No. 9-C Welder, 1,054 ft. N, 466 ft. E of No. 4-C.
Comp.; 240 bbls.; sand 5,594-5,650 ft.; T.P. 975 lbs.; C.P. 1,025 lbs.

Plymouth Oil Co.'s No. 10-C Welder, 1,500 ft. from W line, 266 ft. from N line, Sec. 48.
Running tubing; sand 5,624-40 ft.

Plymouth Oil Co.'s No. 11-C Welder, 933 ft. N, 167 ft. W, No. 5-C Welder.
Drlg. sand 5,661 ft.

Plymouth Oil Co.'s No. 12-C Welder, 933 ft. S line, 1,400 ft. W line, Sec. 49.
T.D. 5,643 ft.; set 7-in. csg. 5,632 ft.; W.O.C.

Plymouth Oil Co.'s No. 13-C Welder, 933 ft. N, 933 ft. W No. 3-C Welder.
Drlg. 4,264 ft.

Plymouth Oil Co.'s No. 14-C Welder, 466 ft. W line, 300 ft. from Chiltipin Creek and 1,453 ft. SE No. 8-C.
Location.

Sun Oil Co.'s No. 1 Stone, offset to Magnolia No. 1 Corpus Christi Bank.
Location.

Los Olmos—Starr County

H. C. Horton's No. 2 Sanchez, 150 ft. NW cor. Blk. 3, Share 72, Porcion 72.
Tested oil and S.W. 501-05 ft.; drlg. deeper.

Ed Linberg's No. 7 Bass, 1,500 ft. from W line, 1,675 ft. from N line of Share 6, Porcion 75.
S.D. 500 ft.

Placetas—Starr County

Hughston Oil Co.'s No. 1-A Gregg-Wood, S end of Por. 84; replacement well, 990 ft. S of State Highway No. 4.
3,370 ft.; S.D.

Rio Grande—Starr County

Hiram Reed's No. 5 D.&C., 475 ft. from E line, 185 ft. from N line of Blk. 6, Tract 21, Por. 80, Jurisdiction of Camargo.
Moving in material.

Hiram Reed's No. 1-A D.&C., Blk. 2, Tract 21, Por. 80.
Drlg. 2,709 ft.

Houston Oil Co.'s No. 5 Morgan, Sec. 7, Range 5.
Derrick.

Sioux & Heard's No. 2 Goodrich & Woods 150 ft. W line, 450 ft. N line, Blk. 5, Tract 5, Por. 81.
Waiting on csg.; T.D. 1,346 ft.

W. W. Zimmerman's No. 2 D.&C., 1,122 ft. W. 150 ft. from S line of Blk. 1, Tract A-77, Porcion 81.
Coring 1,411 ft.

Sam Fordyce—Starr County

J. H. Anderson's No. 1 Guerra, 232 ft. N line, 285 ft. W line, Tract 254, Por. 39.
Location.

Burnsdall and Phillips' No. 1 Yturria, 330 ft. E line, 230 ft. S line, 100-ac. tract, Por. 100.
Moving in material.

Cortez Oil Co.'s No. 2-C Smith, 330 ft. from N line, 690 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.

Cortez Oil Co.'s No. 3-C Smith, 330 ft. from N line, 1,150 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.

Cortez Oil Co.'s No. 1 Guerra, 230 ft. S and E lines, Tract 12, Porcion 41.
Moving in material.

Gem Oil Co.'s No. 2-B Seabury, 150 ft. N line, 537 ft. E line, 20-ac. tract, Por. 38.
Comp.; 70 bbls.; sand 2,806-11 ft.

Harrison, Davis & Bishop's No. 4 Guerra, Tract 12, Porcion 41.
Drlg. 365 ft.

Harrison, D. D., Oil Co.'s No. 4 Lula George, 230 ft. N line, 590 ft. W line, S½ Tract 13, Por. 41.
Rigging up.

Henshaw et al's No. 1 Seabury, 219 ft. N line, 248 ft. E and W lines, Tract 258, Por. 38.
Comp.; est 75 bbls. on 3/32-in. tubing choke; sand 2,774-77 ft.; T.P. 50 lbs.

Henshaw & Rothert's No. 2 Seabury, 658 ft. N line, 248 ft. W lines, 15-ac. tract, Tract 256, Por. 38, Jurisdiction of Reynosa, Starr County.
Derrick.

Kingwood Oil Co.'s (Ralph E. Fair, Inc.) No. 4 Guerra, 165 ft. S line, 1,150 ft. E line, Share 12, Por. 41.
Location.

Kingwood Oil Co.'s (Ralph E. Fair, Inc.) No. 1 Seabury, 150 ft. NE cor. 10 acres, Tract 256, Por. 38.
Location.

Kingwood Oil Co.'s (Ralph E. Fair, Inc.) No. 6 Lawrence, 150 ft. N line, 550 ft. E line, Tract 274, Por. 39.
Drlg. 1,423 ft.

Kingwood Oil Co.'s (Ralph E. Fair, Inc.) No. 4 J. Lawrence, 300 ft. from N line, 150 ft. from W line of W 40-ac. tract 274, Por. 39.
No report.

Lacy's No. 2 Seabury, 230 ft. S line, 530 ft. W line, 6.25-ac. tract, Tract 256, Por. 38.
Set csg. 2,788 ft.; W.O.C.

H. J. Porter's No. 2 C. E. Smith, N end of S½ of tract in Tract 278, Porcion 40.
Spudded; S.D.

E. Powell's No. 2 Lula George, 510 ft. W line, 230 ft. S line, 20.11-ac. tract, Tract 13, Por. 41.
Location.

E. Powell's No. 1 Lula George, SW cor. of NW 20-ac. Tract 13, Porcion 41.
Comp.; est. 40 bbls.; sand 2,757-61 ft.; T.P. 110 lbs.

Rogers O. & G. Co.'s No. 2-B Guerra, 150 ft. S and E lines, 12.5-ac. tract, Por. 39.
Location.

Skelly Oil Co.'s No. 4 Seabury, 219 ft. N line, 248 ft. E line, E 15-ac., NW 30-ac., S 263.8-ac., Tract 256, Por. 38, J. of Reynosa, Starr County.
Location.

Skelly Oil Co.'s No. 5 Seabury, 658 ft. N line, 248 ft. E line, E 15-ac., NW 30-ac., S 263.8-ac., Tract 256, Por. 38, J. of Reynosa, Starr County.
Location.

Skelly Oil Co.'s No. 6 Seabury, 219 ft. S line, 248 ft. E line, E 15-ac., NW 30-ac., S 263.8-ac., Tract 256, Por. 38, J. of Reynosa, Starr County.
Location.

Bruni—Webb County

Associated Oil Co.'s No. 7 Bruni, 330 ft. from NW line, 660 ft. NE of No. 5, Blk. 7, M. Arispe grant.
Location.

Highland Oil Co.'s No. 8 Bruni, 1,650 ft. from NW line, 330 ft. from NE line, Sur. 7.
Coring 2,407 ft.; had sand 3,387-94 ft.; no report.

Highland Oil Co.'s No. 12 A. M. Bruni Estate, 530 ft. E of No. 6, 330 ft. from S line of 206-ac. tract, M. Arispe grant.
Location.

O. W. Killam's No. 39 Bruni, C Blk. 50, Sur. 15.
Coring 3,110 ft.

Carolina-Texas—Webb County

Caroline-Texas O. & G. Co.'s No. 11 Benavides, 600 ft. W line, 150 ft. S line, NE¼ Sur. 683.
T.D. 5,026 ft.; set liner and ran tubing; T.P. 1,675 lbs.; C.P. 1,800 lbs.; making gasoline.

Laurel—Webb County

South Texas Oil Co.'s No. 1-A Laurel, 217 ft. S line, 83 ft. E line, Blk. 2, Sec. 269, C.C.S.D.&R.G.N.G. Sur.
S.D. 2,390 ft.

West Cole Pool—Webb County

James P. Goslin's No. 2 Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 220.
Drlg. 1,370 ft.

Magnolia Pet. Co.'s No. 2 G. Benavides, C Sec. 186, M. Arispe grant.
Rigging up.

Magnolia Pet. Co.'s No. 1 S. Benavides, 347 ft. NW line, 313 ft. SW line, Sec. 220.
Drlg. 2,757 ft.

Magnolia Pet. Co.'s No. 4 G. Benavides, 313 ft. SW line, 347 ft. SE line, Blk. 223.
Derrick.

Magnolia Pet. Co.'s No. 5 G. Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 254.
Set csg. 2,782 ft.; W.O.C.

Magnolia Pet. Co.'s No. 9 Seacord-Benavides, 330 ft. N and N Wilnes, Blk. 8, Sur. 174.
Comp.; 25 bbls. per hr.; T.D. 2,828 ft.

Magnolia Pet. Co.'s No. 3-X Benavides, 313 ft. SW line, 347 ft. NW line, Blk. 258.
Comp.; 10 bbls. per hr.; 5/16-in. choke; sand 2,786-96 ft.

Magnolia Pet. Co.'s No. 1 Seacord-Benavides, 330 ft. N and NW lines, Blk. 8, Subd. Sur. 174.
Set surface csg.

R. E. Missner's No. 1 Garza, 330 ft. E line, 200 ft. S line, NW¼ SE¼ Sur. 457.
Rigging up.

James P. Nash's No. 3 Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 157.
Drlg. 2,122 ft.

J. J. O'Hern's No. 1 Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 220.
Comp.; 46 bbls. on ¾-in. choke; sand 2,728-61 ft.

Texas Co.'s No. 3 Benavides, 410 ft. SW line, 296 ft. NW line, Blk. 225.
Location.

Texas Co.'s No. 4 Benavides, 330 ft. NW line, 305 ft. SW line, Sur. 15, Arispe grant.
Set csg. 2,750 ft.; W.O.C.

Lopez—Webb County

Mills Bennett's No. 1 Lopez, 330 ft. NW cor. E½ SW¼ Sur. 724.
T.D. 3,601 ft.; dry and abd.

G. G. Mortimer's No. 2 Lopez, 1,990 ft. S line, 2,310 ft. E line, Sur. 73.
Comp.; 14 bbls. per hr. on ¼-in. choke; sand 2,183-89 ft.

G. G. Mortimer's No. 2-M Lopez, 1,650 ft. W line, 1,333 ft. S line, Sur. 73.
Location.

G. G. Mortimer's No. 4 G. Lopez, 1,997 ft. W line, 2,574 ft. S line, Sur. 73.
Location.

Noack—Williamson County

Coffield & Lanning's No. 3 Heap, 200 ft. from N line, 225 ft. from W line of tract in White Sur.
Location.

G. G. Mortimer's No. 1 Lopez, 1,333 ft. from S line, 2,310 ft. from W line, Share 16, Sur. 73.
Drlg. 800 ft.

R. R. Ogden's No. 1 Matteck, 150 ft. N and W lines of 108.5-ac. tract in White Sur.
Location.

Byersville—Williamson County

Taylor Ref. Co.'s No. 2-B Walter Heap, 450 ft. N line, 750 ft. W line, Heap lease.
S.D. 1,065 ft.

Taylor Ref. Co.'s No. 9-A Sladek, H. White Sur., 150 ft. from NE line, 1,200 ft. SE line (creek).
T.D. 700 ft.; shale; S.D.

Escobas—Zapata County

G. E. Glasco's No. 1 Haynes, 200 ft. NW and SW lines Blk. 7, Haynes Subd., Comitas & Villa grants.
Fishing 180 ft.

Reliable Oil Co.'s No. 4 Haynes, 150 ft. SE line, 700 ft. SW line, Blk. 7, Comitas & Villa grants.
Comp.; pumping; T.D. 847 ft.

Texas Co.'s No. 75 Whitehead, 20,035 ft. SW line, 8,867 ft. SE line, Cerrito Blanco grant.
Tested 1,216 ft.; show trace of oil; S.D.

WEST TEXAS WILDCATS

Week Ending August 31

Andrews County

Crafton Oil Co.'s No. 1 Richard & McWhorter, C NE¼ Sec. 13, Blk. A-30, 6 mi. SE of NW cor. of county.
Drlg. 4,600 ft.; rainbow show 4,467 ft.

Fuhrman Pet. Corp.'s No. 2 Ford, 440 ft. from S and 1,320 ft. from E, Sec. 16, Blk. A-43.
T.D. 4,307 ft.; oil 4,209-14 ft.; est. 50 bbls. daily.

Gulf Prod. Co.'s No. 1 J. S. Kelly, 1,320 ft. from S and E, Sec. 2, Blk. A-38.
S.D. 1,770 ft.

Humble Oil & Ref. Co.'s No. 4 Means, 1,983 ft. from N and 660 ft. from E, Sec. 12, Blk. A-35.
Drlg. 3,497 ft.

Shell Pet. Corp.'s No. 1 J. S. Means, 660 ft. from S and 1,980 ft. from E lines of Sec. 2, Blk. A-35, P.S.L. Sur.
T.D. 4,135 ft.; connecting up.

L. G. Stogner et al's No. 1 Mrs. C. George, 660 ft. from S and E, Sec. 25, Blk. A-22, P.S.L. Sur.
Drlg. 2,755 ft.

Sun Oil Co.'s No. 1 J. S. Means, 1,980 ft. from S and 660 ft. from E lines of Sec. 5, Blk. A-35, P.S.L. Sur.
Rigging up rotary.

J. W. Tripplehorn's No. 1 Ogden, 330 ft. from S and 2,310 ft. from W lines of Sec. 6, Blk. A-46, P.S.L. Sur.
Elev. 3,211 ft.; S.D. 4,440 ft.; may acidize.

Wahlenmaier et al's No. 1 Cox Estate, 1,320 ft. from N and W of Sec. 8, Blk. A-33.
T.D. 1,253 ft.; S.D. for casing.

Brewster County

P. C. Dodson's No. 1 Texas American Syndicate, 660 ft. from N and E, Sec. 66, Blk. 10, G.H.&S.A. Sur.
Drlg. 1,715 ft.

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,290 ft. from E of Sec. 21, Blk. 352, W. M. Mitchell Sur.
S.D. 2,150 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur.
Elev. 4,244 ft.; S.D. 1,305 ft.

G. H. Storey's No. 1 Wilson, 1,980 ft. from N and E lines of Sec. 3, Blk. 212, T.&St.L. Sur.
Elev. 3,609 ft.; S.D. 1,875 ft.

Cochran County

Humble Oil & Ref. Co.'s No. 1 C. D Slaughter, 5,600 ft. from S and 6,600 ft from E lines of League 135, Armstrong County School Lands
Derrick.

Kelsey's No. 1 Slaughter, C Labour 34, League 150, R.C.S. Lands.
Derrick.

West Texas Dev. Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands.
S.D. 100 ft.

Coke County

Haggerty et al's No. 1 Gaston, 340 ft. from S and 654 ft. from W, Sec. 11, Jos. Young Sur.
S.D. 3,225 ft.

Concho County

Maverick Oil Co.'s No. 1 Jim Rice, 330 ft. from S and W lines of NW¼ of Sec. 18, S.N. Ry. Sur.
Location.

John W. Westbrook's No. 1 Ledbetter, 1,950 ft. from N and 3,300 ft. from E lines of Sec. 2, Sur. No. 1,672.
Drlg. 40 ft.

Crane County

American Liberty Oil Co.'s No. 1 Tubbs, 796 ft. from S and 330 ft. from W, Sec. 11, Blk. B-27, P.S.L. Sur.
Elev. 2,536 ft.; T.D. 4,050 ft.; set 7-in. csg.

Dobbs Oil Co.'s No. 1 J. Cowden et al, 330 ft. from S and E of N half, Sec. 38, Blk. 1, H.&T.C. Sur.
Drlg. 1,950 ft.

Gulf Prod. Co.'s No. 1 M. B. McKnight, 660 ft. from S and W, Sec. 9, Blk. B-21.
Elev. 2,778 ft.; T.D. 3,713 ft.; P.B. to 3,650 ft.; testing; pumped 46 bbls. oil and 82 bbls. water in 24 hrs.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
Drlg. 5,440 ft.

H. L. Halloway's No. 1 Mayberry, 2,440 ft. from SW and SE, Sec. 17, Blk. 35, H.& T.C. Sur.
S.D. 961 ft.

Magnolia Pet. Co.'s No. 1 Edwards, 330 ft. from S and 1,650 ft. from E, Sec. 2, Blk. B-23.
Elev. 2,778 ft.; T.D. 3,615 ft.; P.B. to 3,540 ft.; acidized 2nd time; shot; running 2½-in. tubing to test.

Crockett County

Adkins Bros.' No. 1 Shannon, 330 ft. from S and 630 ft. from W of 80 in SW¼ Sec. 27, Blk. WX, G.C.&S.F. Sur.
Machine.

Leslie-Hillier et al's No. 1 Todd, 1,200 ft. N and 330 ft. E, Sec. 36, Blk. WX, G.C.&S.F. Sur.
S.D. 800 ft.

Culberson County

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,355 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Drlg. 1,828 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 2,137 ft.

Dawson County

Adams & Turner's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 4,860 ft.

Ector County

Continental Oil Co.'s No. 1 Wight, 2,200 ft. from S and W, Sec. 21, Blk. 42, Twp. 1s, T.&P. Sur.
T.D. 4,050 ft.; waiting on cable tools.

W. P. Dunning, Jr., et al's No. 1 Mrs. Clarence Scharbauer, 440 ft. from S and 2,200 ft. from W lines of Sec. 33, Blk. 44, Twp. 1n, T.&P. Sur.
Location.

Gulf Prod. Co.'s No. 3 Goldsmith, 440 ft. from S and E, Sec. 22, Blk. 44, Twp. 1s, T.&P. Sur.
Standard tools rigged.

Gulf Prod. Co.'s No. 2 Goldsmith, 2,200 ft. from N and 440 ft. from E lines of Sec. 15, Blk. 44, Twp. 1s, T.&P. Sur.
Drlg. 510 ft.

Empire G. & F. Co.'s No. 2 Wight, 440 ft. from N and W, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Cellar and pits.

Eppenauer Drlg. Co. et al's No. 1 Wight, 440 ft. from N and W of NE¼ Sec. 32, Blk. 43, Twp. 1s, T.&P. Sur.
Top lime 3,960 ft.; top Yates 2,935 ft.; set csg. 3,975 ft.; drlg. 4,154 ft.; 300 ft. oil in hole.

C. L. Peters' No. 1 Connell, 330 ft. from N and E lines of NW of Sec. 12, Blk. B-16, P.S.L. Sur.
Drlg. 3,295 ft.

Phillips Pet. Co. and Pure's No. 1 C. Cowden, 2,200 ft. from N and 440 ft. from W, Sec. 14, Blk. 44, Twp. 1s, T.&P. Sur.
Elev. 3,100 ft.; T.D. 4,182 ft.; T.P. 4,060 ft.; made 244 bbls. in 24 hrs. flowing through tubing; may shoot or acidize.

Sun Oil Co.'s No. 1 W. P. Edwards, 466 ft. from N and E lines of Sec. 20, Blk. 43, Twp. 3s, T.&P. Sur.
Location.

Sun and Atlantic O. P. Co.'s No. 1 Holt.
T.D. 4,300 ft.; acidized with 2,000 gals.; no test as yet.

Sun Oil Co.'s No. 1-B Wight, 3,290 ft. from S and 440 ft. from E, Sec. 10, Blk. 43, Twp. 1s, T.&P. Sur.
Top salt 1,830 ft.; base 2,800 ft.; drlg. 3,950 ft.

Roy Westbrook's No. 1 Yarbrough & Allen, 440 ft. from N and W, Sec. 26, Blk. B-14, P.S.L. Sur.
Derrick.

El Paso County

Tri-State Oil Co.'s No. 1 Kinkel, 190 ft. from N and 550 ft. from E, Sec. 237, A.T.&S.F. Sur.
T.D. 985 ft.; U.R. csg.

Fisher County

Tide Water Oil Co.'s No. 1 Newman, 1,788 ft. from N and 1,054 ft. from W of NE¼ Sec. 2½, John Rodman Sur., 4 miles SE of Roby.
Rigging up.

Glasscock County

Moore Bros.' No. 1 Mrs. E. Miller, 660 ft. from S and E lines of Sec. 35, Blk. 34, Twp. 5s, T.&P. Sur.
Drlg. 295 ft.

John L. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 32, Blk. 34, Twp. 2s, T.&P. Sur.
Topped lime 9,471 ft.; show oil and gas 9,484-9,520 ft.; increase oil 9,594-9,600 ft. and 9,633-55 ft.; T.D. 10,115 ft.; S.D

Howard County

John L. Moore et al's No. 1 Snyder, 330 ft. from S and W, Sec. 28, Blk. 30, Twp. 1s, T.&P. Sur.
Elev. 2,302 ft.; T.D. 3,010 ft.; bridged back to 2,850 ft.; shot 300 qts. 2,640-2,850 ft.; now cleaning out with 1,000 ft. oil in hole.

Jeff Davis County

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,322 ft. from E, Sec. 8, Blk. 2, H.&T.C. Sur.
Fishing 1,610 ft.

Jones County

Campbell et al's No. 1 Rowell, in E half of W half, Sec. 6, T.&P. Sur.
S.D. 2,150 ft.

R. L. Crawford's No. 1 S. R. Walser, 200 ft. from S and W, Sec. 1, T.&N.O. Sur.
Drlg. 1,938 ft.; show oil 1,917 ft.

D'Arman & Shelton's No. 1 J. H. Huffaker, 150 ft. from S and 2,490 ft. from E lines of Sec. 25, D.&D.A. Sur.
Moving in machine.

Davenport & Hughes' No. 1 J. D. Farrell, 1,100 ft. from N and 1,540 ft. from E. Sec. 6, Blk. 15, T.&P. Sur.
T.D. 2,002 ft.; S.D. for orders.

Farris & Fikes' No. 2 Jennings, 220 ft. from S and W of NE of SE¼ Sec. 207, B.B.B.&C. Sur.
Location.

Farris & Fikes' No. 3 Jennings, 220 ft. from S and 660 ft. from W of NE of SE¼ Sec. 207.
Drlg. 1,000 ft.

Farris & Fikes' No. 1-A Jennings, 1,980 ft. from S and 150 ft. from W, Sec. 1, L.&G.N. Sur.
Location.

N. H. Martin & Son's No. 1 King, 200 ft. from N and W of E half, Sub. 5, M. Bueno Sur. 197.
T.D. 1,966 ft.; running csg.; oil sand 1,912-22 ft.; est. 25 bbls. daily.

Sandy Ridge Oil Co.'s No. 3 Jones, 1,520 ft. from N and 660 ft. from W, Sec. 5, Blk. 15, T.&P. Sur.
Location.

Ungren & Frazier's No. 1 Jennings, 220 ft. from S and 660 ft. from E of E½ of NE¼ Sec. 207.
Machine.

Kimble County

Wilcox Oil & Gas Co.'s No. 1 J. Patterson, 200 ft. from N and E, Sec. 1, D.&P.R.R. Sur.
Drlg. 2,965 ft.

Loving County

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 2,256 ft. for repairs.

Mason Oil Co.'s No. 1 Kyle, 1,980 ft. from S and E, Sec. 22, Blk. 55, Twp. 1, T.&P. Sur.
S.D. 2,823 ft.

Lynn County

Hart Oil Co.'s No. 1-A Edwards, 425 ft. from N and 865 ft. from E line, Sec. 29, Blk. 1, L.&S.V. Sur.
Drlg. 4,220 ft.

Martin County

William Hix' No. 1 O. B. Holt, C of Labor 12, League 319, Garza County School Lands.
Spudded and shut down.

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
S.D. 100 ft. for csg.

McCulloch County

Mark Hill's No. 1 Moore Bros., 934 ft. from S and 150 ft. from E lines of Sec. 2, State School Land Sur.
T.D. 600 ft.; running casing.

Poulter et al's No. 2 Wyrea, 50 ft. from S and 160 ft. from W, P. W. Rocins Sur.
T.D. 825 ft.; tools stuck.

Mitchell County

Lockhart et al's No. 1 W. C. Berry, 330 ft. from N and 2,310 ft. from E, Sec. 80, Blk. 97, H.&T.C. Sur.
S.D. 344 ft.

Sawtell & Grueber's No. 1 Morrison.
T.D. 2,810 ft.; shot 500 qts.; 2,000 ft. oil in hole; preparing to test.

Nolan County

Harris et al's No. 1 Georgia Institute of Technology, 330 ft. from S and 1,320 ft. from W. Sec. 89, Blk. 24, T.&P. Sur.
Drlg. 101 ft.

Pecos County

Comanche P. L. Co.'s No. 1 Schreff-Blackmore, 330 ft. from SW and 1,650 ft. from SE lines of Sec. 38, Blk. 3, H.&T.C Sur.
Drlg. 620 ft.

Gulf Prod. Co.'s No. 7 White & Baker, 330 ft. from N and E, Sec. 15, Blk. Z, T.C.Ry Sur.
Location.

C. R. Richards' No. 4 Courtney, 920 ft. from N and W, Sec. 78, Blk. OW, 360 ft. S of No. 2.
Elev. 2,967 ft.; S.D. 362 ft.

Tex-Mex Pet. Co.'s No. 1 Phillips-Brandenburg, 330 ft. from S and E of N half Sec. 42, Blk. 8, H.&G.N. Sur.
Moving in material.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
Drlg. 2,860 ft.

Reagan County

Dobbs Oil Co.'s No. 2 Friend, 660 ft. from W and 1,375 ft. from S, Sec. 3, Wm. Allen Sur.
Location.

Dobbs' No. 1 Friend, 2,310 ft. from S and 660 ft. from W of Blk. 3, Wm. Allen Sur., 3 or 4 miles S of Big Lake.
S.D. 2,464 ft.; P.B. to 2,440 ft.; dropped bailer and tubing in hole; may plug.

Culberson & Irvin's No. 1 Ringo.
Drlg. 2,350 ft.

Plymouth Oil Co.'s No. 1 Belcher, 1,320 ft. from S and 466 ft. from W, Sec. 1,231, G.C.&S.F. Sur., 4 miles SE of Centralia.
Drlg. 445 ft.

Sun Oil Co.'s No. 1 L. W. Young, Sec. 1, G.C.&S.F. Sur., Abst. 170.
Material.

Reeves County

Dunigan's No. 1 Davis, 330 ft. from N and W, Sec. 7, Blk. 58, P.S.L. Sur.
Location.

Grisham-Hunter Corp.'s No. 1 T. P. Land Trust, 1,320 ft. from S and W lines, Sec. 27, Blk. 57, Twp. 2, T.&P. Sur.
S.D. 823 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur.
Elev. 2,536 ft.; S.D. 4,938 ft.; show oil 4,892-4,900 ft.

K. Black et al's No. 1 Reeves, C NW ¼ Sec. 20, Blk. 56, P.S.L. Sur., 22 mi. N of Toyah.
T.D. 2,035 ft.; running csg.

Washington Oil Co.'s No. 1 J. M. Radford Grocery Co., 2,640 ft. from S and 340 ft. from E, Sec. 39, Blk. 56, P.S.L. Sur.
T.D. 502 ft.; waiting on casing.

Runnels County

John Caster et al's No. 1 Giesecke, 330 ft. from N and 713 ft. from E, Sub. 3, Blk. 130, J. Hughes Sur. 327.
Rigged up.

Wolverton's No. 1 Willingham, 200 ft. from river and in C of Wilhelm-Wolfgang Sur. No. 425, 1¼ mi. SE of Ballinger.
Fishing 3,460 ft.

Schleicher County

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
T.D. 6,257 ft.; to P.B. to 5,555 ft.; pulled casing to 5,370 ft. and cmtd.; to acidize.

W. C. Proctor et al's No. 1 Judkins & Spencer, C SW ¼ Sec. 4, Blk. V-28.
S.D. 1,872 ft.

Scurry County

Coffield & Guthrie's No. 1 Wade, 990 ft. from N and 330 ft. from W, Sec. 115, Blk. 97, H.&T.C. Sur.
Ready to spud; S.D. for water.

M. L. Goos et al's No. 1 J. E. Murphy, 330 ft. from N and 1,650 ft. from E. Sec. 114, Blk. 97, H.&T.C. Sur.
Elev. 2,287 ft.; T.D. 2,343 ft.; C.O. to put on pump.

Magnolia Pet. Co.'s No. 1 W. M. Scott, 330 ft. from S and W, Sec. 186, Blk. 3, H.&G.N. Sur., 5 miles S of Snyder.
Drlg. 450 ft.

Sutton County

Paul C. Teas' No. 1 G. S. Allison, 660 ft. from S and W, Sec. 49, Blk. A, G.W. T.&P. Sur.
Rigging up rotary.

Taylor County

Anderson et al's No. 1 J. C. High, 2,310 ft. from N and 990 ft. from E. Sec. 8, L.&L. Sur.
Rigged up machine.

Hickok's No. 1 Tittle, 660 ft. from N and W, Sec. 37, Blk. 19, T.&P. Sur.
Drlg. 1,080 ft.

Skaggs & Brewer's No. 1 McClure, 330 ft. from N and E, S½ SW Sec. 3, L.A. L. Sur.
T.D. 1,910 ft.; C.O. to reacidize.

Tom Green County

Twin Oil Co.'s No. 1 W. E. Green, 1,050 ft. from N and 1,400 ft. from W, L. P. Moore Sur. 169½.
S.D. 315 ft.

Upton County

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. P, C.C.S.D.&R.G.N.G. Sur.
T.D. 12,786 ft.; P.B. to 8,286 ft.; shot with 380 qts. from 8,126-8,270 ft.; could not develop commercial production, P.B. to 3,510 ft. to test McElroy pay.

Humble O. & R. Co.'s No. 1 Pollock, C of NW Sec. 4, Blk. M.
Drlg. 8,745 ft.

J. G. McKenzie's No. 1 Taylor, 1,650 ft. from S and 330 ft. from E lines of Sec. 22, Blk. B-2, G.H.&S.F. Sur.
T.D. 630 ft.; S.D. for casing.

W. C. Ray's No. 1 Cordova-Union, 2,025 ft from S and 2,895 ft. from W of NE¼ Sec. 3, A.B. Sur., 5 mi. SE of McCamey.
Rigging up spudder.

Ward County

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 24, H.&T.C. Sur.
T.D. 2,455 ft.; preparing to deepen.

Harry Adams Corp.'s No. 1 Gulf-Bray, 330 ft. from NE and NW, Sec. 14, Blk. 5, H.&T.C. Sur.
Drlg. 830 ft.

California Co. et al's No. 1 McFarland, 990 ft. from NE and 330 ft. from SE Sec. 29, Blk. 34, H.&T.C. Sur.
Drlg. 653 ft.

California Co.'s No. 1 Walling & Gostley, 2,310 ft. from SE and 330 ft. from NE lines of Sec. 18, Blk. 24, H.&T.C. Sur.
Drlg. 1,941 ft.

Eastland Oil Co.'s No. 1 Johnson, 330 ft. NW and NE, Sec. 24, Blk. 34, H.&T.C. Sur.
S.D. 2,570 ft.

Empire G. & F. Co.'s No. 2 Smith, 990 ft. from N and 1,650 ft. from E, Sec. 5, Blk. F.
R.U. standard tools.

Hill et al's No. 1 Clements, 330 ft. from NW and 990 ft. from SW, Sec. 24, Blk. 5, H.&T.C. Sur.
Drlg. 890 ft.

Ice & Luce's No. 1 Baker, 1,650 ft. from NE and 330 ft. from NW, Sec. 15, Blk. 5, H.&T.C. Sur.
Drlg. 1,560 ft.

Skelly Oil Co.'s No. 1 Citizens Natl. Bank, 330 ft. from SE and SW lines, Sec. 40, Blk. 34, H.&T.C. Sur.
Drlg. 2,520 ft.; est. 5 bbls. oil and 2,000,000 ft. gas per day.

Jerry Sines' No. 1 Brown, 330 ft. from NW and NE, Sec. 13, Blk. 5, H.&T.C. Sur.
T.D. 2,148 ft.; P.B. 2,075 ft.; S.D.

West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16.
T.D. 2,568 ft.; P.B. to 2,610 ft.; now S.D.; est. 20 bbls. oil daily showing a little water.

Winkler County

Emperor Oil Co.'s No. 1 Halley, 1,650 ft. from S and 330 ft. from E. Sec. 12, Blk. B-12.
Elev. 2,764 ft.; drlg. 2,714 ft.

Fox & Butler's No. 2 Brown & Altman, 2,310 ft. from S and 1,650 ft. from E Sec. 6, Blk. B-5.
Elev. 2,847 ft.; drlg. 3,108 ft.; oil 3,098-3,108 ft.; est. 20 bbls. hourly.

Gulf Prod. Co.'s No. 2 Keystone Cattle Co., NW cor. Sec. 17, Blk. B-2.
Elev. 2,951 ft.; T.D. 3,702 ft.; C.O. at 3,699 ft.

Gulf Prod. Co.'s No. 3 Keystone Cattle Co., 330 ft. from N and W of NE¼ Sec. 11, Blk. B-3.
Drlg. 3,507 ft.; flowed 85 bbls. oil per day plus 65 per cent water.

Gulf Prod. Co.'s No. 4 Keystone Cattle Co., 330 ft. from N and E, Sec. 20, Blk. B-3.
T.D. 3,756 ft.; shot with 695 qts. from 3,430-3,756 ft.; C.O. at 3,400 ft.

Gulf Prod. Co.'s No. 5 Keystone Cattle Co., 330 ft. from N and W of SW¼ Sec. 6, Blk. B-2.
Elev. 2,952 ft.; fishing 3,500 ft.

Gulf Prod. Co.'s No. 6 Keystone Cattle Co., 330 ft. from N and W of NE¼ Sec. 16, Blk. B-2.
Elev. 2,950 ft.; T.D. 3,676 ft.; shot 770 qts. from 3,275-3,676 ft.; C.O. at 3,400 ft.

Gulf Prod. Co.'s No. 7 Keystone Cattle Co., 330 ft. from N and W of SW¼ Sec. 14, Blk. B-2.
Elev. 2,954 ft.; T.D. 3,652 ft.; testing.

Gulf Prod. Co.'s No. 8 Keystone Cattle Co., 330 ft. from S and W of Sec. 13, Blk. B-2.
Elev. 2,964 ft.; T.D. 3,887 ft.; C.O. at 3,850 ft. and preparing to shoot.

Gulf Prod. Co.'s No. 9 Keystone Cattle Co., 330 ft. from S and W of Sec. 18, Blk. B-2.
Elev. 2,946 ft.; drlg. 3,700 ft.

Humble O. & R. Co.'s No. 2-A Walton, 660 ft. from S and W, Sec. 48, Blk. 26.
Fishing 2,668 ft.

K-D Oil Co.'s No. 1 P. Mitchell, 1,650 ft. from N and 2,310 ft. from E, Sec. 23, Blk. B-10, P.S.L. Sur.
Cable tools rigged up.

J. C. Maxwell's No. 1 Brown & Altman, 2,310 ft. from N and 990 ft. from W. Sec. 6, Blk. B-5.
Elev. 2,844 ft.; T.D. 3,200 ft.; S.D.; est. 75 bbls. daily.

Mascho Oil Co.'s No. 1 Evans, 1,320 ft. from N and W, Sec. 8, Blk. A-56.
Location.

Mascho Oil Co.'s No. 1 Evans, 1,170 ft. from N and 1,320 ft. from W, Sec. 46, Blk. 73, P.S.L. Sur.
Drlg. 160 ft.

Richardson's No. 1 B. F. Jenkins, 440 ft. from S and E, Sec. 13, Blk. 77, P.S.L. Drlg. 155 ft.

Richardson's No. 1 Walton, 440 ft. from S and 2,200 ft. from W, Sec. 1, Blk. B-3. Drlg. 372 ft.

Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11, P.S.L. Sur.
S.D. 2,090 ft.

Skelly Oil Co.'s No. 3 Halley, 2,200 ft. from N and 1,320 ft. from E, Sec. 25, Blk. B-11.
Drlg. 3,319 ft.; oil and gas from 3,247-49 ft.

Sioux Oil Co.'s No. 1 Lowett, 330 ft. from N and E, Sec. 36, Blk. 26, P.S.L. Sur.
T.D. 2,908 ft.; S.D.; est. 50 bbls. per day.

Sun Oil Co.'s No. 1 Halley, 2,200 ft. from N and 440 ft. from E, Sec. 24, Blk. B-12, P.S.L. Sur.
T.D. 3,170 ft.; P.B. 2,732 ft.; heading oil and wtr.

Weaver et al's No. 1 T. Morton, 330 ft. from S and E of N½ Sec. 11, Blk. B-12.
Elev. 2,767 ft.; T.D. 2,948 ft.; P.B. 2,927 ft.; swbng. from 30 to 40 bbls. daily.

Westbrook's No. 1 Brown & Altman, 2,210 ft. from N and E, Sec. 5, Blk. B-5. Derrick.

Wilgo Oil Corp.'s No. 1 Campbell, 900 ft. from N and 300 ft. from E Sec. 2, Blk. 5, P.S.L. Sur., 3 miles E of Kermit.
Elev. 2,884 ft.; T.D. 4,639 ft.; preparing to cement casing.

Yoakum County

C. J. Davidson et al's No. 1 Bennett, 1,320 ft. from N and E, Sec. 678, John H. Gibson Sur.
Elev. 3,557 ft.; drlg. 3,730 ft.

Texas Panhandle Wildcats

Week Ending August 31

Carson County

Danube Oil Co.'s No. 1 Bryan, 398 ft. from N and 409 ft. from E of N¼ of NE¼ Sec. 107, Blk. 4, I.&G.N. Sur.
T.P. 3,095 ft.; T.D. 3,167 ft.; P.B. to 3,150 ft.; swbd. 25 to 50 bbls. oil and some water.

Robert Watchorn's No. 1 Eller, 330 ft. from S and E lines of W½ and SE¼ of Sec. 9, Blk. 7, H.&G.N. Sur.
T.D. 3,801 ft.; P.B. to 3,050 ft.; may shoot.

Childress County

Alma Oil Co.'s No. 1 Lowe, 660 ft. from N and W of SW¼ Sec. 417, Blk. H, W.&N.W. Sur., 8 of Kirkland.
Drlg. 6,525 ft.

Larkins & Warr's No. 1 M. F. Williams, at common corners of Secs. 507, 483, 484 and 508, Blk. H, W.&N.W. Sur.
Fishing 2,300 ft.

Collingsworth County

Smith Bros.' No. 1 Pierce, C NE¼ Sec. 107, Blk. 21, H.&G.N. Sur.
Drlg. 1,562 ft.

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Cottle County

Texas Co.'s No. 9 Johnson, 500 ft. N and 318 ft. W of most northerly cor. of J. A. Smith Sur.
Drlg. 3,601 ft.

Dallam County

Eben Warner's No. 1 Jarboe, 1,520 ft. from S line, 415 ft. from W line, Sec. 3, B.&B. Sur.
S.D. 3,450 ft.

Gray County

Bell O. & G. Co.'s No. 1 Furneaux, 434 ft. from S and E lines of SE¼ of Sec. 110, Blk. B-2, H.&G.N. Sur.
S.D. 3,262 ft. for connection.

Clark & Smith's No. 1-B Short, 126 ft. from N and 330 ft. from E of NW 40 acres, Sec. 2, Blk. 1, H.&G.N. Sur.
Location.

Drilling Exploration Co.'s No. 1 Lapold, 330 ft. S and W, Sec. 141, Blk. 3, I.& G.N. Sur.
Material.

Tom Doswell's No. 1 Herndon, 330 ft. from S and W lines of SE¼ of SW¼ of Sec. 166, Blk. 3, I.&G.N. Sur.
Location.

Farliss et al's No. 1 Ball, 330 ft. from S and E lines of NW¼ of Sec. 6, Blk. 3, B.B. Sur.
Shut down.

Hagy et al's No. 1 Chadwick, 320 ft. N and E, Sec. 210, Blk. B-21, H.&G.N. Sur.
T.D. 3,000 ft.; to set csg.

Harry Foster's No. 1 Johnson, 330 ft. from N and E lines of Sec. 21, L. L. Erwin Sur.
S.D. 331 ft.

Warner's No. 1 Taylor, 330 ft. N and W of SE¼ Sec. 8, Blk. 8, A. W. Wallace Sur.
T.D. 3,116 ft.; pumping 48 bbls. daily.

McLaughlin et al's No. 1 Baggerman, 330 ft. from S and E of NW¼ Sec. 64, Blk. 3, I.&G.N. Sur.
Rig.

Plains Holding Co.'s No. 1 Morse-Gulf, 330 ft. S and W, Sec. 57, Blk. 25, H.&G.N. Sur.
Material.

Saulsbury Oil Co.'s No. 1 Carpenter, C NE¼ Sec. 37, Blk. 25, H.&G.N. Sur.
Cellar.

Taylor Oil Co.'s No. 1 Furneaux, 330 ft. from NE and W of S½ of SE¼ Sec. 101, Blk. B-2, H.&G.N. Sur.
Drlg. 2,955 ft.; T.P. 2,930 ft.

Hall County

Davis et al's No. 1 Knorpp, 330 ft. S and W, Sec. 7, Blk. A, A.B.&M. Sur.
R.U. rotary.

Hartley County

O. V. Beck et al's No. 1 Matador ranch, 350 ft. from N and W of most northerly NW cor. Sec. 20, Blk. 22, Capitol Syndicate Sur.
T.D. 2,310 ft.

Hutchinson County

Barnsdall Oil Co.'s No. 1 Lewis, 330 ft. N and E of W½ of E½, Sec. 7, Blk. 23, B.S.&F. Sur.
T.P. 2,895 ft.; T.D. 3,088 ft.; putting on pump.

Humble O. & R. Co.'s No. 1 Williams, Sec. 137, Blk. 5-T, T.&N.O. Sur.
T.D. 3,045 ft.; standardizing.

Owl Oil Co.'s No. 1 Moore, 275 ft. S and W of NW 80 acres of NW¼, Sec. 21, Blk. M-21, T.C. Sur.
T.D. 3,061 ft.; shot and C.O.

Phillips Pet. Co.'s No. 1 Daniel Dial, 330 ft. from S and 325 ft. from E lines of Sec. 36, Blk. M-23, T.C.R.R. Sur.
Location.

Power Pet. Co.'s No. 1 Hodges, 660 ft. S and E of most southerly 80 acres of S 160 acres of SE 200 acres, Sec. 16, Blk. M-35, T.C. Sur.
Rig.

Stinnett Oil Co.'s No. 1 Starnes, 330 ft. from N and 275 ft. from W of E½ of NW¼ Sec. 22, Blk. M-23, T.C. Ry. Sur.
C.O. 831 ft.

Texas Plains Oil Co.'s No. 1 State, 2,500 ft. SW of SW cor. of Sec. 15, Blk. 47, H.&T.C. Sur., and 330 ft. from N bank of Canadian River.
Drlg. 2,665 ft.

Moore County

Alma Oil Co.'s No. 1 Ward, 330 ft. N and W of SW¼, Sec. 63, Blk. 44, H.&T.C. Sur.
T.D. 3,700 ft.; est. 11,000,000 ft. gas.

Shamrock O. & G. Co.'s No. 1 Bruley & Ryan, C SW¼ of NE¼ Sec. 168, Blk. 3-T, T.&N.O. Sur.
S.D. 2,873 ft.; 99,000,000 ft. of gas at 2,843 ft.

Ochiltree County

James R. Macon's No. 1 W. R. Norris, 330 ft. S and 990 ft. E, Sec. 212, Blk. 43, H.&T.C. Sur.
Moving in heavy duty equipment.

Randall County

English et al's No. 1 Oxnard, 350 ft. from N and 1,320 ft. from E lines of NE¼ Sec. 85, Blk. 2, A.B.&M. Sur.
S.D. 5,685 ft.; C.O.

Wheeler County

Dumar Oil Co.'s No. 1 Linkey, C SW¼ Sec. 106, Blk. 23, H.&G.N. Sur.
Location.

Northern Texas Utilities' No. 1 Calhon, 330 ft. from N and E of SE¼, Sec. 72, Blk. 13, H.&G.N. Sur.
T.D. 2,393 ft.

Consumers May Ask Gasoline Refund

NEW YORK, Sept. 2.—Supreme Court Justice Kenneth O'Brien has upheld in part the contentions of local gasoline distributors in regard to the collection of the city's 2 per cent sales tax. The suit was brought several weeks ago by the Socony-Vacuum Oil Co., Inc., and 10 other major distributors in this city. The companies contended that the city could not lawfully collect the 2 per cent tax on the gross retail price of gasoline because 5 cents of this price represented a 1-cent federal tax and a 4-cent state tax and the action of the city constituted a tax upon a tax.

The court in its ruling held that Controller Frank J. Taylor unfairly construed the sales tax law and that the city tax on gasoline should have been computed on the net gasoline price, exclusive of the federal and state taxes. The court, however, dismisses the companies' complaint holding that they had no standing in court in that they did not pay the tax themselves. The suit, according to the court, might properly have been brought by a consumer. He indicated that consumers could demand refunds from the controller and, failing in this, could bring suit.

The suit has attracted wide attention because of the spread of sales taxes and the fact that the same question has come up in the case of the heavy taxes on cigarets and other commodities. Justice O'Brien in his decision said in part:

"The local tax is one which the purchaser is compelled to pay and not the seller. The seller, however, is made the collector of the tax. If the regulation is unauthorized by the local law or the state constitution or any state statute, it should not be allowed to be enforced. I am of the opinion that the regulation as adopted by the controller is not in compliance with the local law. The controller has by such regulation imposed a tax not only upon the price of the gasoline but upon the taxes of the U. S. Government as well as the State of New York. I cannot agree to such a construction and believe that the local law intended only the initial cost of the merchandise to the purchaser, exclusive of any lawful tax which might be included in the receipt."

Standard in Alberta

CALGARY, Alberta, Aug. 31.—Standard Oil Co. of California, which recently entered the Canadian Field with the establishment of a refinery at Vancouver, British Columbia, has secured ground for trackage at Calgary, and will extend its distribution to Alberta.

John Evans, formerly Rocky Mountain division engineer for Stanolind Oil & Gas Co., at Casper, Wyo., is now assistant chief engineer in the Tulsa offices, working directly under M. C. Hoffman, chief engineer. He was succeeded at Casper by M. P. Huntington, who had been district engineer at Midwest, Wyo.

A. L. Braymer, sales manager for Danciger Refineries, Inc., Tulsa, returned Saturday of last week from a vacation passed in Albuquerque, N. Mex. He was accompanied by Mrs. Braymer and their children, who had spent the summer in Albuquerque.

GEOLOGY OF PETROLEUM

By Dr. WILLIAM HARVEY EMMONS
Head, Department of Geology and Mineralogy, University of Minnesota

1931 edition; 736 pages; 435 illustrations

L. G. E. Bignell, Petroleum Engineering Editor, The Oil and Gas Journal, says in his review of this book:

In preparing this book Doctor Emmons had in mind presenting to the public a textbook and a brief compendium or manual relating to the geology and deposits of oil-bearing areas. Essentially all of the world's oil fields are briefly treated, with references to the important literature.

This book should find a place in every oil man's library, for it will serve as a ready reference to many geological problems that will come up in the course of his work, and also as a means of securing general geological data upon most of the important fields in this and foreign countries.

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Tulsa, Oklahoma

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L. G. E. Bignell, Petroleum Engineering Editor of The Oil and Gas Journal, in reviewing this volume says:

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

PERSONAL PARAGRAPHS

CHARLES C. BROWN, assistant state conservation officer, was a visitor in Tulsa early last week.

J. R. McWILLIAMS, proration engineer for the Carter Oil Company, and family have returned from a vacation spent in Michigan.

MACK HARLOW, safety engineer at the Borger, Tex., refinery of Phillips Petroleum Company, is visiting his parents at Parsons, Kans.

D. S. BUSHNELL, president of the Buckeye Pipe Line Company, has returned from a six weeks' vacation to European points.

H. S. McCLINTOCK, chief scout and assistant to R. H. LYNN, head of the land department of Phillips Petroleum Company, is in a hospital at Kansas City, Mo., for medical attention.

TOM BROWNFIELD, chief scout of the Carter Oil Company, and his family are spending their vacation at the C. A. SAVAGE cabin at Lake Francis, near Siloam Springs, in extreme eastern Oklahoma.

E. H. MOORE, independent oil producer of Tulsa, with MRS. MOORE and some friends, returned home early last week from an extended vacation to the Pacific Coast, Hawaiian Islands and Alaska.

HARRY BLACKSTOCK of Oklahoma City is under treatment in a hospital at Baltimore, Md.

ANDREW RAFFEL, consulting accountant, Tulsa, is taking his vacation in Hot Springs, Ark., this year.

L. P. TEAS, head of the geological department for Humble Oil & Refining Company at Houston, Tex., is spending his vacation visiting in the East.

R. T. FIKE, superintendent of motor transportation for the Mid-Continent Petroleum Corporation, is returning from an extended vacation in the West.

ALFRED BRIESE, of the Wheeling Machine Products Company, Wheeling, W. Va., is spending some time in the Mid-Continent fields calling on the trade.

R. D. BURNS, general superintendent of the Okmulgee, Okla., refinery of the Phillips Petroleum Company, has returned from a vacation spent at Galveston, Tex.

W. W. FLEMING, president, and R. C. GWILLIAM, counsel, of the Marathon Oil Company, were recent visitors at the offices of the Ohio Oil Company in Findlay, Ohio.

A. C. ELTER, Humble Pipe Line Company, San Antonio, Tex., is spending two weeks with his parents in Findlay, Ohio. He will return to San Antonio about September 6.

HARVEY H. BLAIR, Wichita, Kans., operator, has returned from a vacation on his ranch in Colorado. His partner, WILLIS L. HARTMAN, is on a fishing expedition at Creed, Colo.

GEORGE T. HENSON of Salt Lake City, president of the Utah Southern Oil Company, spent several days in Tulsa the past week.

J. F. COCORAN, special representative, Trimont Manufacturing Company, Boston, Mass., has returned to his office in Tulsa after a two month's trip to the factory and eastern cities.

G. S. WALDEN, chairman of the board of the Standard-Vacuum Oil Company, who has been at The Hague offices of the company, returned last week to the New York headquarters.

J. E. CROSBIE was at Indianapolis, Ind., last week attending the races. His stable took the big purse at the races at Springfield, Ill., recently. He expects to return to Tulsa early in September.

PAUL GARRETT, who has been field superintendent in the Lucien Pool, Oklahoma, for the Shell Petroleum Corporation, has exchanged positions with C. A. McNALLY, formerly in the Texas producing division.

WILLIAM HARRIS of Mission, Tex., is the new manager of the Woodsfield Pipe Line Company, succeeding NELSON P. WIMBERLY, who has joined the Valley Pipe Line Company. The Woodsfield company has a gathering system in the Samfordyce Field.

FRED E. COOPER, representing Allis-Chalmers Manufacturing Company, Milwaukee, Wis., is on a business trip to California.

A. G. BAILEY, sales manager, Allis-Chalmers Manufacturing Company tractor and winch division, Tulsa, is in East Texas on business.

T. F. NEWMAN, formerly Oklahoma district geologist for the Skelly Oil Company, has joined the geological forces of the Stanolind Oil & Gas Company, and is at present located in its Tulsa office.

HAMILTON W. SMITH, formerly assistant secretary of the Pennsylvania Crude Oil Association, with headquarters at Oil City, has joined the sales staff of Kendall Refining Company at Bradford. S. F. PRATT succeeds Mr. Smith as assistant secretary of the association.

KENNETH B. BARNES, formerly of the petroleum and natural gas engineering department of Pennsylvania State College and head of the Geologic Standard Company of Tulsa, has been named head of the petroleum production department of the University of Tulsa college of petroleum engineering, R. L. LANGENHEIM, vice president of the university, has announced. Mr. Barnes, a native of Ponca City, resigned from the Penn State College faculty last June after five years.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

September 8, 1910

The Texas Co. has a wireless equipment on its office building in Houston and will erect similar equipment in Port Arthur and Shreveport for intercommunication and to keep in touch with its tanker fleet.

Ernest L. Connelly, of Bartlesville, Okla., and Miss Corinne Bailey of Vincennes, Ind., were married in Bartlesville, September 5. Mr. Connelly is connected with the Eastern Torpedo Co. as a stockholder and manager.

William A. Barstow, president and general manager of the Solar Refining Co., Lima, Ohio, dies suddenly at the age of 60 years.

20 YEARS AGO

September 9, 1915

The Royal Dutch-Shell interests through the Roxana Petroleum Corp. is acquiring oil properties in Oklahoma in large parcels. It has a big deal on fire in Healdton at this time, which will involve millions of dollars and about 30,000 bbls. daily production, flush and semiflush.

George Harmon and others' test on the Los Chotes tract in the Tampico, Mexico, field comes in at 90,000 bbls. of oil per day. It is only 80 feet from the LaCorona gusher.

John W. Frye, pumper for D. T. Borland, in the Venango County district in Pennsylvania, has pumped one lease 46 years without losing a day's time. He started work in 1869.

10 YEARS AGO

September 10, 1925

Amon G. Carter, Fort Worth publisher, cancels arrangement for a special train to the A.P.I. convention in Los Angeles in favor of The Oil and Gas Journal's A.P.I. special.

Notwithstanding that a certain two wells in the Brea Olinda Field in California have produced over 8,000,000 bbls., a well located between the two big producers has just come in starting at 2,400 bbls. per day. The three wells are closely spaced.

Mrs. Jake Groner, of Bradford, Pa., a clairvoyant, engaged by Fred Anderson, a gas operator, to make locations for three wildcat gas wells, "hits it right" each time, the wells coming in as paying producers.

DR. W. O. HOTCHKISS has been chosen president of Rensselaer Polytechnic Institute, Troy, N. Y.

COLIN C. RAE, production engineer for Skelly Oil Company, has been on vacation in Denver, Colo., and Salt Creek, Wyo.

WALTER B. PYRON, vice president of the Gulf Production Company at Houston, Tex., returned the past week from Los Angeles.

J. L. COOK, vice president and secretary of Marathon Oil Company, is recovering from an illness that kept him in a hospital some days.

C. L. JOHNS, scout for the Pure Oil Company at Corpus Christi, Tex., is spending his vacation in Mexico. He is accompanied by his family.

MYRON E. WAGNER, general superintendent of the Marathon Oil Company, and MRS. WAGNER are visiting their sons, Clyde and Carl, at the Wagner camp at Estes Park, Colo.

FRANK ADAMS of the Gulf Coast land office of Barnsdall Oil Company, with MRS. ADAMS and children, visited relatives and friends in Tulsa and Okmulgee last week. They now reside at Houston.

CLIFF E. HEARN, of the Gypsy Oil Company scouting department, is due back from vacation next week. Accompanied by MRS. HEARN, he has been sojourning in New Mexico and Colorado resorts.

WESLEY ZANE, who for several years has been secretary of the budget committee of the Standard Oil Company (New Jersey), has retired from active service. Mr. Zane was

well known in the Standard organization which he served for many years as departmental auditor and executive assistant.

W. M. IRISH, president of the Atlantic Refining Company, accompanied by MRS. IRISH, returned on the Ile de France, of the French line, last week from a European trip.

WALTER C. TEAGLE, president of the Standard Oil Company (New Jersey), who has been on a business trip to the European offices of the company, will return to New York City early this month.

HOWARD CAGLE, chief of the Richfield Oil Company's publicity department, became the proud father of an 8½-pound boy last week.

S. D. WILLIAMS has been appointed manager of tube sales by the Timken Steel & Tube Company and will make his headquarters in Canton, Ohio.

R. J. ST. GERMAIN, geologist and independent operator of Houston, Tex., is spending several weeks on vacation in Minnesota and southern Canada.

JOHN M. LYTLE, oil producer, of the firm of Lytle & Gray, Tulsa, has sufficiently recovered from his accident to return from Pennsylvania to his home in Tulsa.

J. R. PEMBERTON, California state oil umpire, was the principal speaker at the Mardi Gras festival held at Huntington Beach, Calif., on Labor Day, September 2.

J. M. VETTER, consulting geologist and formerly with the Rio Bravo Oil Company, is now connected with the Pan American Producing Company and will be in charge of the company's geological department.

BILL HARRIS of Mission, Tex., is the new manager of the Woodsfield Pipe Line Company, succeeding NELSON B. WIMBERLY, who has a new position with the Valley Pipe Line Company. The Woodsfield company has a gathering system in the Samfordyce Field in Southwest Texas.

BRUCE H. ROBINSON, of the General Petroleum Corporation, will discuss the economics of pumping well production at the next regular meeting of the Los Angeles Basin Chapter of the American Petroleum Institute to be held in the Shell Oil Company's recreation hall in Long Beach on September 10.

L. E. HODGES, vice president in charge of production for Portable Rig Company, Houston, Tex., is making a business trip in Oklahoma, Kansas and Texas fields.

J. F. ANDERSON, oil operator of Salt Lake City, Utah, has selected McAllen, Tex., as his headquarters for operations in the Rio Grande Valley region of Southwest Texas. Mr. Anderson owns acreage in Hidalgo, Starr, Zapata, Willacy and Cameron Counties and is drilling a test in Cameron County at the present time. He is the third important operator to locate in McAllen in the past three weeks.

E. HOLMAN, president of the Creole Petroleum Corporation, is visiting the Venezuelan properties of the corporation.

JACK WOODWARD of the Texas Railroad Commission has been transferred from East Texas to San Antonio where he will have charge of all bottom hole pressure measurements in Southwest Texas. Mr. Woodward is a petroleum engineer and a graduate of Texas University. He is now running a series of tests in the Greta Field of Refugio County under the supervision of WILLIAM L. MASSEY, Railroad Commission supervisor of Southwest Texas.

Active in Burbank Unitization

Kenneth E. Beall, assistant to the vice president in charge of the economics department of Phillips Petroleum Company, is one of a small group of executives and engineers who refused to believe that so constructive a move as the unitization of the South Burbank Pool could not be accomplished. After months of hard work this job was consummated and it now promises to become one of the most successful projects of the kind in the oil industry. Mr. Beall devoted much time to the evaluation of properties to be included in the unit in connection with the determination of the percentage equities of various owners. He also spent a great deal of time in helping to convince certain owners that the project was sound, and their equity fair, and in finding buyers for a few who could not be persuaded to join.

KENNETH E. BEALL

Mr. Beall, a native of Indiana, graduated from Purdue University in 1919 after spending most of 1918 in the Signal Corps of the U. S. Army. He went to Bartlesville, Okla., immediately after graduation and was employed as junior engineer by the Empire Companies. In 1920 he joined the production department of the Phillips Petroleum Company. Later he was transferred to the economics department.

Mr. Beall is married and has two children. He is interested in all forms of sports, played on the varsity basketball and baseball teams at Purdue and continued to play basketball and tennis for many years. Lately he has confined himself pretty much to golf and is reported to know parts of the Hillcrest course which no other players ever found.

R. S. M. MITCHELL and NEIL GRAY, from the president's department of the Shell Petroleum Corporation, St. Louis, Mo., were in Tulsa over the week-end.

J. E. DAVIES, senior chief engineer of the Anglo-Saxon Petroleum Company's fleet, has received the Silver Jubilee medal awarded by KING GEORGE to members of the British mercantile marine.

C. C. JOYS was elected vice president of the A. O. Smith Corporation, Milwaukee, Wis., on August 27. In addition to his executive functions, Mr. Joys will continue in charge of sales in the oil products division.

A. F. WINN, Tulsa, traffic manager for Skelly Oil Company, and MRS. WINN, left last Saturday for Cincinnati, Ohio, from which point they were to take an Ohio River trip to Pittsburgh, Pa. They planned to be gone several weeks.

R. T. HERNDON, vice president and executive sales manager of the Texas Company of California, has returned to the Los Angeles office of the company following completion of a marketing survey covering California, Washington and Oregon.

J. H. WELCH, of McAllen, Tex., pipe line worker, is recovering from severe injuries suffered when a length of pipe rolled over him as workmen were skidding it into position on the new Valley pipe line. His worst injury was a broken leg.

H. F. SINCLAIR, chairman of the executive committee of the Consolidated Oil Corporation, and GEORGE MACDONALD, director and member of the company's finance committee, spent several days in Los Angeles, Calif., recently making a survey of the situation regarding sale of the Richfield Oil Company, but have subsequently returned to New York.

L. V. BOGGS, vice president of the National Supply Corporation in charge of the New York office, returned last week to the United States after spending several weeks in Europe where he visited the principal offices of the company.

E. R. RUTENBER, research engineer for Waukesha Motor Company, recently flew to Wichita, Kans., where he was met by ARCH CAMPBELL of Waukesha Motor Company. From Wichita they made a 3,000-mile field trip through West Texas and New Mexico.

J. M. SITLER, who has been general purchasing agent of the Humble Oil & Refining Company since 1929, has returned to the New York offices of the Standard Oil Company (New Jersey) where he will become assistant purchasing agent of the latter company. Mr. Sitler was for several years with the Bureau of Supplies and Accounts at Washington, D. C., and later with the Shipping Board and joined the purchasing department of the Standard company as office manager in 1921.

FREDERICK G. CLAPP, following a professional engagement in the West Indies, spent three weeks in Massachusetts with his family, took a week's walking trip with CLIFFORD B. CLAPP on the Long Trail of the Green Mountains in Vermont and returned August 27 to his New York office.

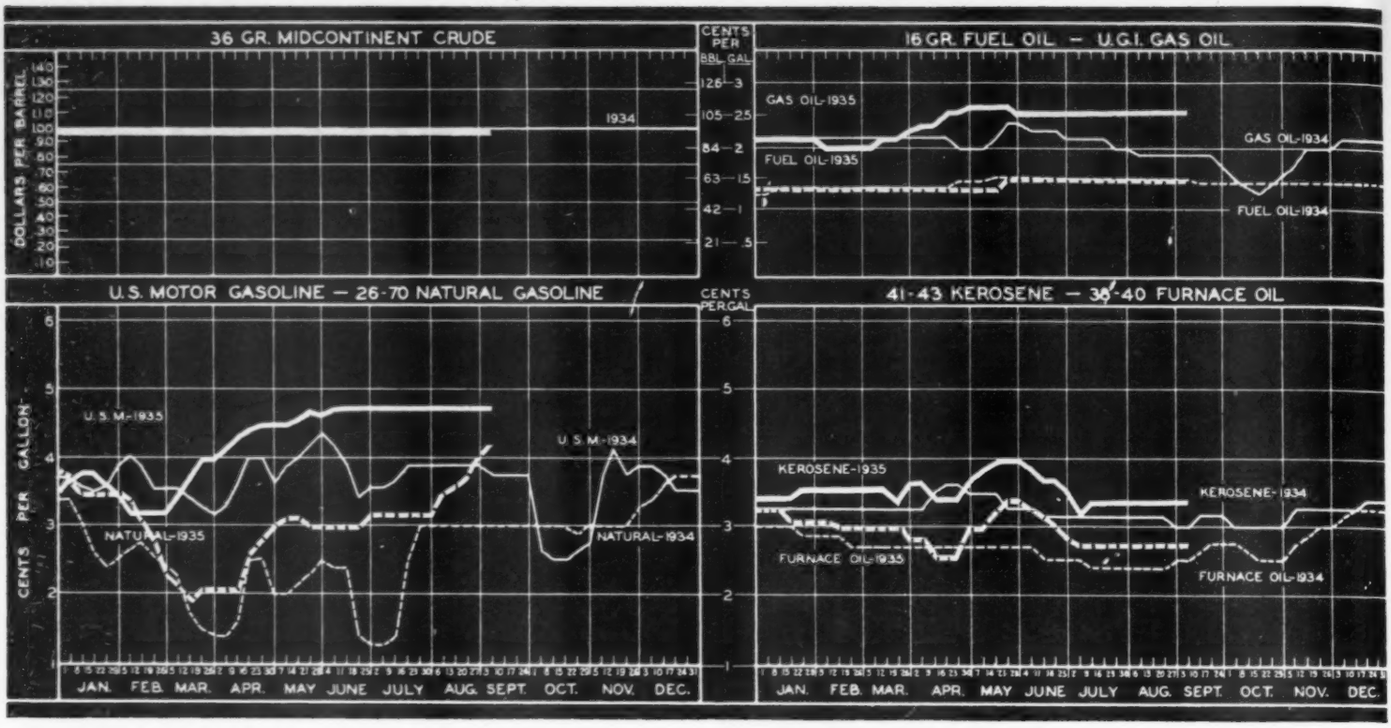
M. E. NICKLIN, assistant sales manager for Waukesha Motor Company, recently flew to Houston, Tex., where he accompanied L. E. HODGES of Portable Rig Company, Houston, Tex., on a trip through Texas and Louisiana fields. Mr. Nicklin stopped in Dallas, Oklahoma City and Tulsa on his return.

GEORGE L. YATES of Bartlesville, Okla., will become instructor in petroleum engineering at the University of Pittsburgh this fall, succeeding LEO R. NUHFER, who has resigned to take a position with the Peoples Gas Company of Pittsburgh. Mr. Yates is the son of V. N. Yates of the Indian Territory Illuminating Oil Company.

J. M. McNEAL, sales manager in England and Continental Europe for the Landis Machine Company, is visiting the home office at Waynesboro, Pa. While in the United States, Mr. McNeal will attend the National Machine Tool Builders' Exposition at Cleveland.

CAPT. JOHN BRYCE SHAW, infantry, in the land department of the Marathon Oil Company, Ardmore, Okla., is on active duty with the general staff at Eighth Corps Area Headquarters, Fort Sam Houston, Texas. Captain and MRS. SHAW are staying at the Fort Sam Houston Officers' Club.

A. G. SPOONER has sold his interest in the Bell Refining Company, Calgary, Alberta, and T. W. McKEE, former credit manager, has been named managing director, succeeding FLOYD HUFF, resigned. R. A. BROWN will continue as vice president, and at an early meeting of shareholders a new president will be elected to succeed A. G. Spooner.



Continued Good Business in Gasoline Is Foreseen by Group 3 Marketers

By T. F. SMILEY

With the Labor Day holiday over and the vacation season waning, gasoline's marketing tide in the Oklahoma (Group 3) territory is expected to recede gradually till it settles down to the normal winter stage. Tank car shipments have been large for several weeks. While the greater part of this business was on contract, the spot market has been active. Much of the buying was in preparation for Labor Day, regarded as marking the peak of the gasoline consuming season. Refiners who found themselves lacking material for their own needs bought from those who had some to spare

Fall Business Expected to Be Good

Market students generally look for a continuation of satisfactory buying throughout September and most of October. Although these are not catalogued as vacation months, they nevertheless see many tourists returning home from long motor trips, and as they ordinarily are attended by exhilarating weather the family car is kept busy with week-end trips, evening drives and home-and-office travel. The result is that refiners and marketers have come to expect good business to extend into the fall, and the conditions this year they say are particularly propitious.

Concern manifested in the Group 3 area at first over the slash in crude prices on the Pacific Coast last week has almost disappeared. Informed observers say there is no reason to expect the California situation, thus far a local one, to have any marked influence on interior markets. The reduced prices for crude are unlikely to be in force for more than two or three months, they assert, in which case "offshore" prices for gasoline will not be affected. The reason for cutting crude prices, they point out, was to force an agreement among operators to curtail production so that California gasoline markets, upset by price wars, might be placed on a profitable basis again.

Refined Oil Market Barometer

Except on the West Coast refinery markets maintain a generally cheerful tone. The California crude price cuts weakened gasoline and kerosene in that territory and caused uneasiness in the East. Within a short time, however, the crude cuts are expected to revitalize West Coast markets without having impaired markets in other areas at all. Fall outlook assuring.

MID-CONTINENT. Gasoline steady. Naturals strong. Demand for heating oils rising.

EAST COAST. Gasoline demand leads list. General market tone lacks firmness.

GULF COAST. Market generally lifeless. Prices unchanged.

PENNSYLVANIA. Bright stock increase likely. Neutrals apparently stabilized. Kerosene improved. Gasoline dull.

CALIFORNIA. Gasoline and kerosene off result of crude cut. Rest of market listless.

CHICAGO. Gasoline demand good, tank car prices fairly firm. Kerosene irregular.

Tank car gasoline prices in Oklahoma kept at the same level they have been maintaining since last June. Instances of retail price-cutting in the Chicago district were reported. The Michigan product comes into competition with Oklahoma material at some of these points. These soft spots in the retail situation were not reflected in the Group 3 wholesale market, it was said.

Naturals Are Still Running Strong

Natural gasoline, far from slackening the swift stride at which it has been traveling for weeks, quickened its pace and recorded another price advance. Some manufacturers were reported to have sold their September output. Most of the movement recently has been on contract, but efforts to obtain material in a market in which offerings were scarce created active competition that sent quotations up an eighth. The naturals thus have risen a total of three-eighths of a cent throughout most grades in the last two weeks and the trend still was upward.

The demand has been most insistent for stabilized grades, with the result that prices on this class of material have moved up fastest. This action of the market has turned many buyers back to the 22 and 26-pound grades. The market was reported firm at the higher levels.

Neither kerosene nor furnace oil was lively, but there was no weakness and prices were holding. Large quantities of zero gas oils and higher-gravity fuels were reported going to storage.

Some Going Back to Heating Oils

Some refiners who reduced their furnace oil output last spring, in accordance with custom, to increase their production of gasoline, are returning now to making heating oils. Although industry absorbs substantial quantities of these products, domestic heating forms the major market.

Large companies have been making furnace oil contracts for several weeks with their regular jobber accounts and thus have most of their output sold for the season. They are contracting with brokers for disposition of any surplus they see they are going to have. Not all refiners have followed this course, however, evincing no haste to enter into contracts for their distillate output.

Steadiness was reported in the lubricant group, with no price changes. Inquiries for wax were being turned into actual orders, but not in sufficient volume to create better prices. Heavy fuels displayed an unsteady undertone, though prices were maintained except for the lowest grades.

Uneasiness in East Coast Markets Due to California and Local Conditions

By C. O. WILLSON

NEW YORK, Sept. 2.—The crude price reductions in California effective last week coupled with certain local conditions has brought a feeling of uneasiness in eastern refinery markets. The tank car prices on practically all products have not been as firm as many of the sellers would like to see them and developments of the past week are not interpreted as indicating any improvements in this situation for the immediate future.

Whenever any price changes were announced during the week they were on the down side. Tank car prices on gasoline are unchanged from the levels that have been effective for several weeks. The demand has been excellent and some observers consider domestic gasoline the strongest product of the local market. Prices range from 5¾ cents for low U. S. Motor, 6 cents for middle octane, 6¼ cents for 65 octane and above to 6½ to 6¾ cents for the branded ethylized regular grades of the major refiners. While sellers have endeavored to secure concessions under these postings it is certain that no large business has been placed at lower prices for immediate delivery.

In the export end, developments at the Gulf have been less favorable. This market has been weakening fractionally since late July. Last week, 5 cents was quoted on 64-66 375 gasoline at the Gulf and prices on the other grades ranged down to 4⅝ cents for U. S. Motor. These quotations were for shipments in which no octane rating was specified. The octane rating is increasing in importance among foreign buyers. For inquiries where 63 to 70 octane is specified less material is available and prices are more in line with the coastwise quotations. The latter market continues fairly firm with middle octane U. S. Motor quoted 5¼ to 5⅜ cents and 65 octane plus 5⅜ to 5½ cents.

Kerosene and Furnace Oils

There is still some bargain material in kerosene and furnace oils at Atlantic Seaboard points although most sellers are confident that these products barring general crude price reductions in the Mid-Continent, will give a better account of themselves before the end of September. Most companies are quoting 5 cents on kerosene, No. 1 furnace and range oils but these prices have been shaded at least one-fourth cent in spot sales during the week with barge shipments as low as 4⅝ cents. The buying has improved and it is believed that it will shortly absorb the distress material available and with the seasonal increase in actual consumption of these products, the market can be stabilized at the 5-cent level. In regard to furnace oils, however, the long-time contracts that have been made with jobbers by refiners and by the distributors with consumers do not point to high prices this season. The buyers in many cases are protected against advances from present levels.

The heavier fuel oils are steady with some increase in demand. Exports demand for wax is slow and prices on all refined grades have been reduced one-eighth cent. There has been some improvement in the domestic demand for wax and those prices which are substantially higher than the export quotations are unchanged. In the lubricating oil end, the weakest products are the paraffin base neutrals. Following reductions in the Pennsylvania Field, local quotations have been reduced one-half cent with indications that other reductions may be necessary.

Local observers do not anticipate an immediate reaction to the lowering of California crude price schedules. The sellers are hopeful that conditions which brought about the reductions will be rectified within the next week or two so that the threat to local markets will be removed. At the same time they realize from past experience, the developments to be expected should present California prices for crude oil continue over a period of several weeks or months.

California Situation

So far this year California crude and refined products have not been an important factor in East Coast markets so far as the domestic market is concerned. The West Coast competition has been felt in shipments of crude oil, gasoline and other products to European and South American markets. In the coast-to-coast movement through the canal, shipments have been averaging around 35,000 bbls. daily consisting principally of gasoline. There has been no movement of crude oil and the shipments of heavy oils have been confined to heavy oils suitable for the manufacture of asphalts. The heavy fuel oil movement of last year ended early this year with the completion of contracts which brought approximately 10,000,000 bbls. of California fuel oil to eastern terminals.

Gasoline now being received from California, it is understood, is not spot material but gasoline which to a large extent represents intercompany transactions based on yearly contracts. The comparative price structures at Atlantic, Gulf and West Coast points have not been favorable to tanker purchases from California refiners and the same situation has applied to practically all products.

There has been some weakening in the California spot prices recently. Middle octane material has been offered under 5 cents at Los Angeles. Cargo material at 4 cents, it is pointed out, would be competitive with present prices in New York Harbor. The tanker rate in these comparisons is figured at 1½ cents per gallon which would mean a delivered price of 5½ cents. In this connection it is said that a tanker sale of California gasoline to a French buyer was a factor in forcing Gulf Coast sellers to reduce their quotation to 5 cents basis the Gulf. It is also pointed out that California crude if available in tanker lots could now be brought around to East Coast refiners at delivered prices which would be lower than the present cost of Mid-Continent crudes.

The conclusion of these investigations is that a general lowering of Mid-Continent crude and Gulf and Atlantic Seaboard refinery prices will be necessary if the new schedules in California are maintained indefinitely. As expressed by one executive, "Oil markets east of California have enough troubles of their own," and are "in no position to absorb excess material at low prices in western operations."

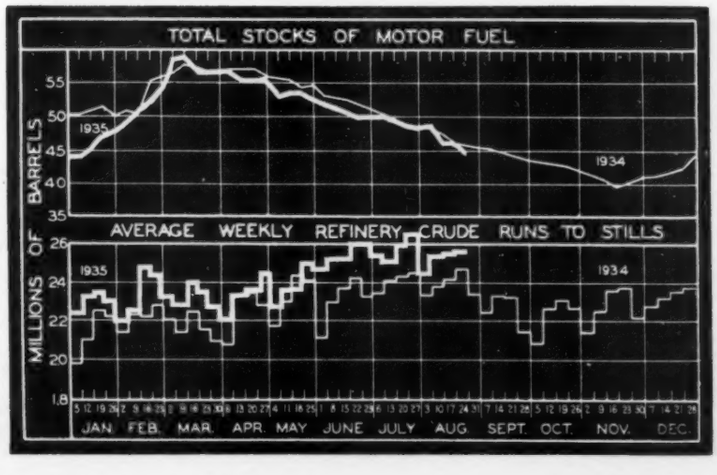
Regarding the local troubles some observers fear developments in eastern gasoline markets unless supplies are curtailed, starting immediately. Reports from scattered points show price cutting in retail and commercial discount sales including New Jersey, where the industry had one of the most disastrous price wars in its history last year. The difficulty appears to lie in the spread between the delivered tank car and service station prices. As previously explained the posted tank car quotations in the New York Harbor area are firm and posted quotations are being adhered to by all classes of sellers. The net service station price is 13 cents on regular grade gasoline. The net margin between the delivered tank car and service station prices in northern New Jersey is 6 to 7 cents per gallon depending on the grade purchased.

A few independent distributors and jobbers have been underselling this net retail price from

(Continued on Page 110)

American Petroleum Institute Weekly Refinery Statistics

Figures for the week ending August 29, 1935, unavailable on account of Labor Day holiday.



Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended Aug. 31 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
71	48½	6,300	70⅛	67	67½	Amerada Corp.	788,675	N.P.	50cQ	7-31-35	$2.00	55⅝	39	47⅝	18½
28	21⅝	9,700	23⅝	22⅛	22¼	Atlantic Refining	2,664,904	$25	25cQ	9-16-35	1.00	35⅛	21½	32½	12⅝
10⅝	5⅞	28,600	10½	9	9⅝	Barnsdall Corp. A	2,195,397	$5	....	5-11-31	....	10	5⅞	11	3
14	3⅝	178,700	12⅝	10¼	12⅝	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	‡ .25	19¼	6⅝	28⅛	9
10½	6½	65,700	9¾	8⅜	9	Consolidated Oil Corp.	13,996,072	N.P.	14c	10-31-34	.42	14¼	7¼	15⅜	5
23	15⅛	21,200	22½	20	21⅜	Continental Oil of Delaware	4,682,722	$5	12½c	7-31-35	.50	22⅜	15⅜	19⅝	4⅞
20⅝	11¾	5,400	19⅛	17⅝	18	General Asphalt	387,149	$10	....	6-15-32	....	23½	12	27	4⅝
3⅝	1½	4,900	3½	3	3	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅝	2½	7⅝	1⅞
1⅞	⅜	1,400	⅞	⅝	⅝	Louisiana Oil Refining	1,302,158	N.P.	....	.....	....	3⅜	¾	4	⅝
13⅞	9½	5,600	11¼	10½	10½	Mid-Continent Petroleum	1,857,912	$10	15c	5-15-35	.50	14⅜	9¼	16	3⅜
20⅞	9	2,200	19¾	18	18¼	National Supply of Delaware	382,501	$25	....	5-15-31	....	21⅛	10	28⅝	4
14¼	9¼	15,900	11⅝	10½	10⅝	Ohio Oil Co.	6,563,377	N.P.	15c	6-15-35	.45	15⅞	8½	17⅝	4⅜
11⅜	6⅜	9,300	10⅞	9⅛	9⅛	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.40	9⅜	5½	9½	3
1⅝	½	1,000	1	⅞	⅞	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅝
29⅜	13¾	119,100	29⅜	25¼	26¾	Phillips Petroleum	4,154,687	N.P.	25c	8-30-35	1.00	20¾	13⅜	18⅝	4⅝
11⅝	6½	6,300	10⅝	9	9¼	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	75c & 4% Stk.	16¾	7¼	17⅝	6⅜
10¼	5⅞	13,400	9¼	8¼	8⅝	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅝	2¼
44⅜	29½	1,000	43¼	41⅝	42	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.35	39⅛	28⅝	39¾	17⅝
35⅞	20¾	5,800	33	28	28	Seaboard Oil of Delaware	1,244,283	N.P.	15cQ†	9-15-35	1.00	38⅝	20¾	43⅝	15
11½	5½	8,000	10¼	9	9⅛	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
98½	63⅛	500	96⅜	90	90	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18¾	5	2,800	6⅛	5⅝	6	Simms Petroleum	461,698	$10	$10 liq.	7-5-35	.55	17⅛	7¼	12⅜	4⅞
11½	6½	2,800	11⅜	9⅞	10¼	Skelly Oil	1,008,514	$25	....	12-15-30	....	11½	6	9⅞	3
15⅜	10⅝	60,700	12	10⅝	11⅜	Socony-Vacuum	31,154,379	$25	15cQ	9-16-35	.60	19⅞	12½	17	6
38⅞	27⅜	21,100	34¼	31½	31⅞	Standard Oil of California	13,102,900	N.P.	25c	9-18-35	1.00	42⅞	26½	45	19½
28	23	14,900	27	25⅝	25¾	Standard Oil (Indiana)	15,215,677	$25	25cQ	9-16-35	1.00	32⅜	23¼	34	17
32	23	100	22	22	22	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	2.00	41	26	39⅞	12⅜
50½	35⅜	27,700	46½	45⅜	45½	Standard Oil of New Jersey	25,856,081	$25	50cSA‖	6-15-35	1.25	50⅛	39¼	47½	22⅜
75½	60½	600	67	65½	65½	Sun Oil	1,733,013	N.P.	25cQ	9-16-35	$1 & 9% Stk.	74¼	51½	59	35
23⅜	16½	22,700	21¼	19⅜	20	Texas Corp.	9,486,417	$25	25cQ	10-1-35	1.00	29⅜	19⅝	30⅛	10⅜
8⅝	3¼	53,200	8¼	6⅜	6⅜	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅜
12	7⅝	11,900	10¼	9⅜	9½	Tide Water Associated	5,618,672	N.P.	25cQ	9-6-35	....	14⅜	8	11⅜	3⅛
103⅝	84	1,300	101⅜	99¼	99¼	Tide Water Associated pfd.	666,524	$100	$3§	7-1-35	§8.50	87	64½	65¼	23½
20¼	14⅜	8,600	18⅞	17¼	17½	Union Oil of California	4,386,070	$25	25cQ	8-10-35	1.00	20½	11½	23⅜	8½
26½	20⅞	2,200	24	22¼	24	Union Tank Car Co.	1,200,000	N.P.	30cQ	9-3-35	1.20	25⅜	15⅝	22¾	10⅛
2⅝	1	500	2⅛	2⅛	2⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5⅜	2	5½	2

*Ex-dividend. †Plus extras. ‡Payable in preferred stock. §On account of accumulated and current dividends. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Dividend of one-half share Barnsdall Refining Corp.

Market Record of Active Oil Stocks Listed on New York Curb

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1935 High	1935 Low	Week ended Aug. 31 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
42	30½	150	41½	41	41	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-14-35	$3.00	38	26	39¾	25
4⅛	1⅝	2,500	2¾	2¼	2⅜	Carib Syndicate	799,020	25c	....	.....	....	5½	1½	7⅜	⅛
157	115	No sales	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1Q†	9-27-35	11.50	150	116	129	71
2⅞	⅜	50,900	2¼	1⅜	2⅛	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1⅛
1¼	½	2,000	‖	⅞	‖	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	⅛
⅞	¼	400	⅝	⅝	⅝	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅝
18¾	10	12,400	18⅜	17⅝	18⅛	Creole Petroleum	6,974,356	$5	....	.....	....	14⅜	9⅝	12	4⅜
6⅝	4¼	100	5⅛	5⅛	5⅛	Darby Petroleum	509,696	$5	25c	7-15-35	.50	7½	4⅛	8	2¼
2	¾	100	1½	1½	1½	Derby Oil & Refining	263,162	N.P.	....	.....	...	2¼	1	2⅝	⅞
38	34	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	8-1-35	4.00	37	30	41⅝	20
74⅜	50¼	2,100	63¾	60¼	60⅞	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
64	44	3,800	58	56½	57	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10-1-35	¶1.25	49½	33¼	105½	40
22½	15⅜	8,500	20	19¼	19½	Imperial Oil of Canada	26,919,871	N.P.	25cSA†‡	6-1-35	.92½	17⅞	12⅝	15⅞	6½
6	3⅝	200	5¼	5¼	5¼	Indiana Pipe Line	300,000	$10	15cSA	5-15-35	.35	6⅞	3⅝	8	3⅛
39¾	28	9,500	36¼	35	35⅝	International Petroleum	14,247,088	N.P.	75cSA†‡	6-1-35	2.28	33⅜	19⅝	23½	8⅞
9½	4⅜	7,900	8⅜	7¼	7⅝	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	....	5	2⅛	2¼	⅄
6¾	3½	400	4¼	3⅜	3⅜	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
8⅜	4½	2,900	8½	7½	8½	Lone Star Gas	5,382,723	N.P.	15c	8-15-35	‖ .16	8⅜	4¼	11⅞	4⅜
5½	4¼	800	5⅛	5	5	Mountain Producers	1,682,182	$10	15cQ	7-1-35	.60	5½	4	6½	2½
18¾	11¾	900	17⅜	17⅛	17⅛	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-35	1.00	18⅛	13⅛	20	10
10½	6¾	600	9⅞	9¾	9⅞	National Transit	509,000	$12.50	40cSA	6-15-35	.75	9½	7	10	5½
3¼	2	2,000	3¼	2½	3⅛	New Bradford Oil	1,445,202	$5	10cSA	9-16-35	.20	2½	1¾	2⅛	½
2⅛	1	400	1⅞	1⅞	1⅞	New Mexico and Arizona	1,000,000	$1	....	.....	....	2⅜	1	1⅞	½
4⅛	3	100	4⅜	4⅜	4⅜	New York Transit	100,000	$5	15cSA	4-15-35	.30	4⅜	3	4⅞	3
7	5¼	100	6¾	6¾	6¾	Northern Pipe Line	120,000	$10	25cSA	7-1-35	.50	7	4⅝	6⅛	4¼
2⅛	1⅛	12,500	2⅛	1⅞	2	Pantepec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3¾	½
1½	⅝	No sales	..	..	..	Ryan Consolidated	296,931	N.P.	....	.....	....	3⅝	⅞	4¼	⅝
7½	5½	1,300	6⅞	6¾	6⅞	Salt Creek Producers	1,496,859	$10	20cQ	8-1-35	.80	7⅞	5½	9½	3½
28⅜	21⅝	2,300	25⅜	23½	24⅜	South Penn Oil	1,200,000	$25	30cQ	9-30-35	1.20	26½	17½	22⅛	11
4⅞	3⅞	600	4⅞	4¼	4⅞	Southern Pipe Line	100,000	$10	15cSA	9-3-35	.25	5½	3½	6	2⅛
52½	45¼	100	48	48	48	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10-1-35	5.00	47	41	43	24½
21⅝	18	2,800	20⅞	20⅝	20⅝	Standard Oil of Kentucky	2,604,790	$10	25cQ†	9-14-35	1.50	18⅜	14⅝	19¼	8⅝
12	7¾	500	11	10⅜	11	Standard Oil of Nebraska	188,403	$25	....	6-20-34	.50	16⅞	8¼	20½	11
19⅜	11½	600	15¼	14⅜	15¼	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
1⅜	⅞	5,100	1⅛	1⅛	1⅛	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	‖	1½	⅜
6⅞	5	1,900	5⅝	5¼	5½	Texon Oil & Land	336,028	N.P.	15cQ	9-30-35	.90	11	4⅝	13⅜	6¼

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Includes 50 cents on old $25 par value stock. ‖Payable in preferred stock.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PRICES ON REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of September 3, 1935

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—
U. S. Motor grades:
Below 63 octane .04¾ .04⅞
63-70 octane .05⅝ .05⅝
60-62 400 grade:
Below 63 octane .04¾ .04⅞
63-70 octane .05⅝ .05⅝
64-66 375 .04⅞ .05
68-70 360 .05 .05⅛

NORTH TEXAS—
U. S. Motor grades:
Below 63 octane .04¾ .04⅞
63-70 octane .05⅝ .05⅝
60-62 400 .04¾ .04⅞
64-66 375 .04⅞ .05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
U. S. Motor grades:
Below 63 octane .05⅛
63-70 octane .06¼
60-62 400 .05¼

ARKANSAS (Ark., N. La., Miss. del.)
U. S. Motor grades:
Below 63 octane .05⅛
63-70 octane .06¼

CHICAGO (based on Group 3)—
U. S. Motor grades:
Below 63 octane .04¾ .04⅞
63-70 octane .05⅛ .05⅝
60-62 400 .04¾ .04⅞
64-66 375 .04⅞ .05
68-70 360 .05 .05⅛
Aviation fighting grade .05⅝ .06

PENNSYLVANIA (inland refineries)—
58-60 U. S. Motor:
Below 60 octane .05⅛
60-64.9 .06⅛
65-70 octane .06⅝
64-66 375 .05⅝
68-70 350 .06

CALIFORNIA (domestic movement)—
54-58 U. S. Motor .04 .05
58-60 400 .05 .06

EAST COAST—
U. S. Motor, below 60 octane:
*New York (Bayonne) .05⅝
Baltimore .05⅝
U. S. Motor, 60-64.9 octane:
*New York (Bayonne) .06
Philadelphia .06
Boston .06
Baltimore .06
Charleston, S. C. .06
U. S. Motor, 65 and above:
*New York (Bayonne) .06⅛
Philadelphia .06¼
Boston .06¼
Baltimore .06¼
Charleston, S. C. .06¼

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—
U. S. Motor grades:
Below 60 octane .05 .05⅛
60-64.9 .05¼ .05½
65 octane and higher .05½

Naphtha

PENNSYLVANIA (inland refineries)—
50-52 450 (blending) .05⅝
52-54 450 (blending) .05⅝
54-56 450 (blending) .05½

CHICAGO (based on Group 3)—
50-52 450 (blending) .04⅞ .05
Cleaners' naphtha, 56-58 gr, 200 i.b.p., 20 e.p. .06⅞ .07
Lacquer diluent, 180 i.b.p., 250 e.p. .07⅞ .08
Lacquer diluent, 140 i.b.p., 200 e.p. .08⅞ .09
Rubber solvent, 68-70 gr., 160 i.b.p., 300 e.p. .06⅞ .07
Stoddard solvent, 300 i.b.p., 410 e.p., over 82° flash .06⅝ .06½
Pet. thinner, 260-300 i.b.p., 410 e.p., over 82° flash .06⅝ .06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p., 330 e.p. .06⅞ .07
Petroleum spirits .05⅝ .06

Natural Gasoline

OKLAHOMA (Group 3)—
Grade 26-70 .04½
Grade 18-55 .04¾ .05
Low vapor pressure grade:
*14 lb. v.p. (max.) .05½ .05⅝
*12 lb. v.p. (max.) .05⅝ .06
NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
Grade 26-70 .04⅝

NORTH TEXAS—
Grade 26-70 .04
Grade 18-55 .04⅝ .04⅞
Low vapor pressure grade:
*14 lb. v.p. (max.) .05⅝ .05½
*12 lb. v.p. (max.) .05⅝ .05⅝
CALIFORNIA—
75-85 375-390 .04½ .05½

*Nominal.

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—
41-43 .03⅝ .03½
42-44 .03½ .03⅝

NORTH TEXAS—
41-43 .03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
41-43 .03⅝

ARKANSAS (Ark., N. La. & Miss del.)
41-43 .03⅝

PENNSYLVANIA (inland refineries)—
45 .04½
46 .04⅝
47 .04⅝

CHICAGO (based on Group 3)
41-43 .03⅜ .03½
42-44 .03⅝ .03⅝

CALIFORNIA (Pac. Coast market)—
38-40 high burning test .03¼ .04

NEW YORK (Bayonne, N. J.)—
41-43 .04⅝ .05

GULF COAST (domestic)—
41-43 .04¼ .04½

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area. Refineries absorb freight to 80 cents a ton.)

Pile run 6.00
Direct from still 7.00
Egg, nut, pea 8.00
Lump 8.50

Furnace Oil

OKLAHOMA (Group 3)—
No. 1 prime white, 38-42 .03½ .03⅝
No. 1 straw, 38-40 .03 .03½
No. 2 straw, 32-36 .02⅝ .03
No. 2 dark, 32-36 .02⅝ .02⅞
No. 3, 28-32 .02½ .02⅝
No. 3, 15 and above, 28-32 .02⅝ .02½

NORTH TEXAS—
No. 1 prime white, 38-42 .03½ .03⅝
No. 1 straw, 38-40 .03 .03½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
No. 2, 32-36 .03½ .03¼

ARKANSAS (Ark., N. La., Miss. del.)
No. 2, 32-36 .03½
No. 3, 28-32 .03¼

CHICAGO (based on Group 3)—
No. 1 prime white, 38-40 .03⅛ .03½
No. 1 straw, 38-40 .03 .03¼
No. 2 straw, 32-36 .02⅞ .03
No. 2 dark, 32-36 .02⅝ .02⅝
No. 3, zero to 15, 28-32 .02½ .02⅝
No. 3, 15 and above, 28-32 .02¼ .02½

NEW YORK (Bayonne, N. J.)—
No. 1 .04⅝ .05
No. 2 .03⅞ .04
No. 4 .03½ .03⅝

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—
U.G.I. gas oil .02½ .02⅝
No. 4, 24-28 .87½ .90
No. 4, 15 and above, 24-28 .75 .80
No. 5 .70 .75
No. 6 .67½ .70
Below 18 fuel oil, industrial .65 .67½

NORTH TEXAS—
U.G.I. gas oil .02½ .02⅝
No. 4, 24-28 .87½ .90
No. 5 .72½ .75
No. 6 .67½ .70
Below 18 fuel oil, industrial .65 .67½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
U.G.I. gas oil .02⅝ .02¾
10-14 fuel oil, industrial .75 .80

ARKANSAS (Ark., N. La., Miss. del.)
10-14 fuel oil, industrial .60 .65

CHICAGO (based on Group 3)—
U.G.I. gas oil .02¾ .02½
No. 4, 24-28 .85 .90
No. 4, 15 and above, 24-28 .72½ .77½
No. 5, 18-22 .65 .70
No. 6, 10-16 .55 .60

Fuel oils of more than 40 cold test generally 5 to 15 cents per bbl. in these areas.

PENNSYLVANIA (inland refineries)—
36-40 .04

CALIFORNIA—
Los Angeles:
30-34 gas oil, per bbl 1.05 1.25
27 plus Diesel 1.05 1.25
27 plus Diesel (bunkers) 1.25 1.30
12-16 (bunkers at tidewater) .87 .95
10-16 (cargo lots) .75 .92
12-17 (tank cars) .60 .95
San Joaquin Valley:
10-18 (tank cars) .55 .75
San Francisco:
27 plus Diesel, per bbl. 1.25
27 plus Diesel (bunkers) 1.35
10-16 (bunkers) 1.00

GULF COAST—
28-30 gas oil .03½ .03⅝
28-30 Diesel (bunkers) 1.70
Bunker C (bulk cargoes) .85 .90
Bunker C (bunkers) .95 1.00

NEW YORK (Bayonne, N. J.)—
27 plus, gas oil .04
28-30 Diesel (lighterage 6½ cents per bbl.) 1.65
28-30 Diesel (tank cars) .04
*Bunker C (to ocean going ships in N. Y. harbor) .95
Industrial fuel (tank cars) .03⅝

*Lighterage charge 5c bbl. additional.

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.P.A.)

OKLAHOMA (Group 3)—
Zero to 10 Cold Test:
150-3 .10
180-3 .11¼
180-4 .10⅝
200-3 .11⅝
200-4 .11⅛
240-3 .13⅝
240-4 .13½
280-3 .14⅝
280-4 .14
300-3½ .15⅛
400-4 .17⅛
100-2 paraffin oil .06⅝
15-20 Cold Test:
200-3 .10⅝
200-4 .10¼
240-3 .12⅝
240-4 .12¼
280-3 .13⅝
280-4 .13

GULF COAST—
Pale Oils:
200-3 .07 .07½
300-3 .07½ .08
500-3½ .08½ .09
750-3½ .09 .09¼
1,200-3½ .09½ .09⅝
2,000-4 .09⅝ .10
Red Oils:
200-5-6 .07 .07¼
300-5-6 .07¼ .07½
500-5-6 .08 .08⅛
750 .08⅛ .09
1,200-5-6 .09¼ .09½

CALIFORNIA (moving to dom. market)
Pale Oils:
100-2½-3 .07½ .07⅝
200-2½-3 .08 .08½
300-3-3½ .08⅝ .09⅝
350-3-4 .10¼ .10⅝
400-3-4 .11½ .12
450-3-4 .12¼ .12½
550-3-4 .12⅝ .13¼
600-3-4 .13¼ .13½
Red Oils:
200-4-5 .08¼ .08⅝
300-5-6 .08⅝ .09
350-5-6 .09⅝ .10
400-5-6 .10¼ .10½
450-5-6 .10⅝ .11
500-5-6 .11 .11⅛
600-5-6½ .11⅜ .12¼
700-6½ plus .12½ .12⅝
750-6½ plus .13 .13¼
900-6½ plus .13¼ .13½

PENNSYLVANIA—
150 vis. at 70° F., color, 400-405 flash:
Zero pour test .19½ .20
10 pour test .18½ .19
15 pour test .18 .18½
25 pour test .17 .17½
180 vis. at 70° F., 3 color:
25 pour test .20 .20½
200 vis. at 70° F., 3 color:
Zero pour test .24 .24½
10 pour test .23 .23½
16 pour test .22½ .23
25 pour test .21½ .22

Bright and Steam Refined

OKLAHOMA (Group 3)—
Bright Stocks:
190-200 D .18
150-160 D, 0-10 .15
150-160 D, 10-25 .14½
150-160 25-40 .14
*150-160 E .14
Steam refined:
630 green (treated) .09½
600 light green, untreated .08½
600 dark green, untreated .05 .06

PENNSYLVANIA—
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):
10 pour test .20 .20½
15 pour test .19 .19½
20 pour test .18 .18½
25 pour test .17 .17½
Steam refined:
600 .09½ .10
650 .11 .11½
600 Pennsylvania flash .12 .12½
630 flash .17 .17½
600 Warren E filtered .13 .13½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—
124-126 (a.m.p.) w.c. scale .02 2.05

PENNSYLVANIA (inland refineries)—
122-124 (a.m.p.) w.c. scale .02 .0205
124-126 (a.m.p.) w.c. scale .02 .0205

NEW YORK—
Wax in bags fully refined:
123-125 (a.m.p.) wax .0420
125-127 (a.m.p.) wax .0430
128-130 (a.m.p.) wax .0455
130-132 (a.m.p.) wax .0480
133-135 (a.m.p.) wax .0510
135-137 (a.m.p.) wax .0565
124-126 (a.m.p.) w.s. .0200 .0210
124-126 (a.m.p.) y.s. .0200 .0205
Petrolatum in barrels, carload lots:
Dark green .01⅞
Amber .02⅞ .03
Extra amber .03 .03½
Lily white .06⅝ .06⅝
Snow white .07⅝ .07⅞
Cream .05⅝ .05⅞

CHICAGO (f.o.b. switching district; carload lots in bags, add 3¢ for a. m. p.)
122-124 (a.s.t.m.) wax .0440 .0450
125-127 (a.s.t.m.) wax .0465 .0475
127-129 (a.s.t.m.) wax .0480 .0490
*130-132 (a.s.t.m.) wax .0520 .0530
*132-134 (a.s.t.m.) wax .0545 .0555

*Prices applicable for wax shipped in bulk or bag.

Export Prices

GASOLINE

GULF COAST—
U. S. Motor .04⅝
60-62 400 .04⅝
61-63 390 .04¾ .04⅞
64-66 375 .05

LOS ANGELES—
U. S. Motor grades:
53-55 octane .04
55-65 octane .04 .04¼
65-67 octane .04¼ .04½
67-69 octane .04½ .04⅝
Above 69 octane .04⅝ .05
58-60 400 endpoint .04½ .05

KEROSENE

GULF COAST—
41-43 prime white .03⅝
41-43 water white .03⅝ .04
44 water white .04¼

LOS ANGELES—
41-43 water white .04¼ .04⅝

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—
Cylinder Stocks:
600 Warren E .18½ .19
600 S.R. unfiltered .16½ .17
650 S.R. unfiltered .18
600 flash S.R. .19 .19½
630 flash S.R. .23 .23½
Bright Stocks:
8 color .24
6½ plus colors in dilution .24

NEUTRAL OIL

200-3 color .28 .28½
150-3 color .23 .23½

PARAFFIN WAX

NEW YORK (prices per pound)—
123-125 a.m.p. .035
125-127 a.m.p. .03625
128-130 a.m.p. .03875
130-132 a.m.p. .04125
133-135 a.m.p. .04625
135-137 a.m.p. .04875
Crude scale:
124-126 w.s. .0200 .0205
124-126 y.s. .019 .02

RETAIL OIL MARKETS

Tank wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of September 3, 1935

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Chicago	15.5	17.5	4.0	9.5
Decatur, Ill.	15.5	16.5	4.0	9.5
E. St. Louis	15.2	17.2	4.0	9.5
Joliet	15.5	17.5	4.0	9.5
Peoria	15.5	15.5	4.0	9.5
Quincy	15.3	17.3	4.0	8.0
Davenport, Ia.	15.5	(†)	4.0	9.5
Des Moines	15.3	(†)	4.0	9.6
Mason City	15.7	(†)	4.0	10.0
Sioux City	15.5	(†)	4.0	9.5
Duluth, Minn.	16.3	18.3	4.0	10.6
Mankato	15.9	15.9	4.0	10.2
Minneapolis	15.9	17.9	4.0	10.2
LaCrosse, Wis.	16.9	18.9	5.0	10.2
Green Bay	17.2	19.2	5.0	10.5
Milwaukee	15.3	16.3	5.0	10.1
Madison	16.9	18.9	5.0	10.2
Detroit, Mich.	14.5	16.0	4.0	9.3
Grand Rapids	16.6	18.6	4.0	10.5
Saginaw	16.8	18.8	4.0	9.3
Evansville, Ind.	17.2	19.2	5.0	10.3
Indianapolis	17.4	19.4	5.0	10.5
South Bend	17.6	19.6	5.0	12.0
Fargo, N. Dak.	16.9	18.9	4.0	11.2
Huron, S. Dak.	17.4	19.4	5.0	10.7
Sioux Falls	16.9	18.9	5.0	10.2
Kan. City, Mo.*	14.9	16.9	4.0	7.0
Springfield	14.6	16.6	4.0	8.9
St. Louis	15.2	17.2	5.5	9.5
St. Joseph*	14.9	16.9	4.0	9.2
Wichita, Kans.	14.4	16.4	4.0	6.3
Bartlesville, Ok.	16.0	18.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers: Undivided accounts, 1½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Stanolex Furnace Oil in Chicago

Effective June 27, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons and more, 7.0 cents. No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons or more, 7.0 cents; No. 2 (30-34, stw. zero), same prices and quantities as No. 1; No. 3 (22-26, zero), less than 150 gallons, 7.2 cents; 150 gallons or more, 6.2 cents. No. 4 (12-16 zero), less than 400 gallons, 7.2 cents; 400 gallons or more, 6.2 cents, viscosity of No. 4, 85 and 100° F.; No. 5, less than 400 gallons, 5⅝ cents; 400 gallons or more 4⅝ cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Denver, Colo.	18.0	20.0	5.0	11.0
Pueblo	18.0	20.0	5.0	13.0
Grand Junction	20.5	22.5	5.0	15.0
Casper, Wyo.	18.5	20.5	5.0	11.5
Cheyenne	18.5	20.5	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	19.5	21.5	6.0	16.5
Helena	21.5	23.5	6.0	17.5
Great Falls	20.5	22.5	6.0	17.5
Salt Lake, Utah	19.0	21.0	5.0	16.0
Twin Falls, Ida.	22.0	25.0	6.5	18.0
Boise	22.5	24.5	6.0	18.0
Albuquerque, N. M.	20.0	22.0	*6.5	13.0

*One-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Atlanta, Ga.	20.0	22.0	7.0	12.0
Augusta	20.0	22.0	7.0	14.0
Macon	20.0	22.0	7.0	13.0
Savannah	18.0	20.0	7.0	14.0
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	20.0	22.0	8.0	10.0
Montgomery	22.0	24.0	8.0	13.5
Jackson, Miss.	19.0	21.0	7.0	11.0
Vicksburg	19.0	21.0	7.0	12.0
Jacksonville, Fla.	18.5	20.5	8.0	10.0
Miami	18.5	20.5	8.0	13.5
Pensacola	18.5	20.5	8.0	11.5
Tampa	17.0	19.0	8.0	11.0
Lexington, Ky.	19.5	21.5	6.0	10.0
Covington,	18.0	20.0	6.0	11.5
Louisville	18.5	20.5	6.0	10.0
Paducah	18.5	20.5	6.0	10.0

In addition to the state tax of 6 cents Montgomery, Ala., has a county tax of 1 cent per gallon and a city tax of 1 cent per gallon on gasoline, and one-half cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Ala., has a city gasoline tax of 1 cent.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Dallas, Tex.	15.0	17.0	5.0	7.0
Fort Worth	15.0	17.0	5.0	7.0
Houston	15.0	17.0	5.0	8.0
San Antonio	16.0	18.0	5.0	8.0
El Paso	17.0	19.0	5.0	10.0
Muskogee, Okla.	16.0	18.0	5.0	8.0
Okla. City	16.0	18.0	5.0	8.0
Tulsa	16.0	18.0	5.0	8.0
Ft. Smith, Ark.	14.5	18.0	5.0	8.0
Little Rock	17.0	20.5	7.5	9.5
Texarkana	15.5	17.5	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Atl'tic City, N. J.	13.5	17.0	4.0	9.0
Newark	13.5	17.0	4.0	7.5
Annapolis, Md.	14.3	18.3	5.0	10.0
Baltimore	14.3	17.8	5.0	7.5
Cumberland	15.8	19.3	5.0	12.7
Wash'g'n, D. C.	12.3	15.8	3.0	9.0
Danville, Va.	16.6	20.1	6.0	12.9
Norfolk	15.1	18.6	6.0	11.2
Petersburg	15.8	19.3	6.0	11.7
Richmond	15.8	19.3	6.0	11.7
Roanoke	16.8	20.3	6.0	12.9
Charles'n, W. Va.	15.0	18.5	5.0	12.6
Parkersburg	14.3	17.8	5.0	11.2
Wheeling	15.5	19.0	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	13.5
Hickory	18.7	22.2	7.0	13.7
Mt. Airy	18.7	22.2	7.0	13.8
Raleigh	18.2	21.7	7.0	18.2
Salisbury	18.5	22.0	7.0	13.6
Charleston, S. C.	16.2	19.7	7.0	11.3
Columbia	18.0	21.5	7.0	13.2
Spartanburg	18.4	21.9	7.0	13.5

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Omaha	17.9	19.9	6.0	10.1
McCook	18.6	20.6	6.0	10.8
Norfolk	18.3	20.3	6.0	10.5
North Platte	18.7	20.7	6.0	10.9
Scottsbluff	19.4	21.4	6.0	11.6

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Ohio points	17.0	19.0	5.0	*12.5

*Includes state tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
San Francisco	16.5	18.5	4.0	11.5
Los Angeles	11.5	13.5	4.0	10.5
Fresno, Calif.	13.0	15.0	4.0	12.0
Phoenix, Ariz.	17.0	17.0	6.0	‡18.0
Reno, Nev.	19.0	21.0	5.0	13.0
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Philadelphia, Pa.	15.0	17.0	4.0	9.0
Pittsburgh	16.0	18.0	4.0	10.0
Allentown	15.5	17.5	4.0	9.0
Erie	15.0	17.0	4.0	8.0
Scranton	15.0	15.0	4.0	10.0
Altoona	16.0	18.0	4.0	10.0
Dover, Del.	15.5	17.5	4.0	10.0
Wilmington	15.5	16.5	4.0	9.0
Springf'd, Mass.	13.2	16.7	4.0	7.5
Worcester	13.3	16.8	4.0	7.5
Hartford, Conn.	13.3	15.8	3.0	7.0
New Haven	12.2	15.7	3.0	7.5
Providence, R. I.	12.0	13.5	3.0	7.0

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
N. Orleans, La.	17.5	21.0	18.0	12.0
Baton Rouge	16.5	20.0	††7.0	11.5
Alexandria	17.5	21.0	†*8.0	10.5
Lafayette	18.0	21.5	‡*8.0	12.5
Lake Charles	18.0	21.5	‡*8.0	††11.0
Shreveport	16.0	19.5	††7.0	9.0
Knoxville, Tenn.	20.0	23.5	8.0	14.0
Memphis	18.0	21.5	8.0	11.0
Chattanooga	19.5	23.0	8.0	11.5
Nashville	19.0	22.5	8.0	12.0
Bristol	17.85	20.6	8.0	14.5

*Includes city tax of 1 cent.

‡Includes 2-cent parish tax. †Includes 1-cent parish tax.

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline			Kero.
	Post deal	Serv. sta.	Inc. tax	tank wag.
Albany, N. Y.	14.2	17	5.0	7.5
*Met. New York	15.05	19.3	5.0	7.35
*Br'kl'n, Queens	14.8	18.8	5.0	7.35
Buffalo	14.0	17.0	5.0	8.0
Rochester	14.0	17.0	5.0	8.5
Syracuse	13.5	16.0	5.0	8.5
Boston, Mass.	13.0	16.5	4.0	7.0
Portland, Me.	15.0	18.5	5.0	7.5
Manch'ter, N. H.	14.8	18.3	5.0	7.75
Burlington, Vt.	16.2	19.7	5.0	8.5

*Includes 2 per cent city sales tax.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Hamilton, Ont.	22.0	25.0	6.0	17.5
Toronto, Ont.	22.0	25.0	6.0	17.5
Brandon, Man.	30.3	33.3	7.0	21.5
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	30.0	33.0	7.0	21.5
Saskatoon, Sask.	32.8	35.8	7.0	24.3
Edmonton, Alta.	32.2	35.2	7.0	23.7
Calgary, Alta.	29.5	32.5	7.0	21.0
Vancouver, B. C.	27.0	30.0	7.0	24.0
Montreal, Que.	20.5	23.0	8.0	17.0
St. John, N. B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada.

In maritime provinces all dealers get 4 cents off service station price. In all other provinces open dealers get 3 cents off service station price and 1 cent additional to 100 per cent accounts, except Montreal City where open dealers get 2½ cents off service station price with 1 cent additional to 100 per cent accounts.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 100-gallon lots if covered by contract.

Retail Price Changes

Standard Oil Co. of Louisiana August 26 reduced tank wagon kerosene 1.5 cents in Lake Charles.

Standard Oil Co. (Indiana) August 20 advanced station gasoline 1.4 cents in Wichita; August 27 reduced tank wagon gasoline 1 cent and advanced station gasoline 1 cent in Minneapolis.

Socony-Vacuum Oil Co., Inc., August 27 reduced posted dealer gasoline .5 cent and station gasoline 1 cent in Syracuse.

Crude Oil Price Changes

The Standard Oil Co. of California makes an average 50-cent per barrel reduction in crude oil prices in that State effective August 29, and all the other important oil purchasers in the State meet the new schedules. The price cuts affected only the gasoline crudes.

Marketers to Meet

The National Oil Marketers Association will hold its annual convention and trade exhibit in the Stevens Hotel, Chicago, October 29, 30 and 31. Important problems to be considered include the proposed voluntary code for the petroleum industry; the outlook concerning regulatory and revenue legislation by the next session of Congress; the N.O.M.A. campaign to retain, strengthen and enforce the United States antitrust laws, and proposed national legislation prohibiting the absorption of any part of the costs of marketing by any other branch of an integrated company.

Petroleum Output

TORONTO, Ontario, Aug. 31.—The daily average crude output of the International Petroleum Co. from its South American fields in July was 94,044 bbls. compared with 91,958 bbls. in June. The only previous occasion when production exceeded 90,000 bbls. was in January, 1935, with 93,617 bbls. In July 1,300,000 bbls. were produced in Peru and 1,600,000 bbls. in Colombia; while for the seven months of 1935 the totals were 8,500,000 bbls. for Peru and 10,300,000 bbls. for Colombia.

Chicago Markets

CHICAGO, Sept. 2.—Opinion as to the gasoline market outlook appears to be growing a little more uncertain. Labor Day gallonage in numerous middle western metropolitan sections was done on a badly disturbed price structure. It has been felt for some time this bad retail situation has been constituting a direct and serious menace to tank car prices.

There is a shade of irregularity in the tank car market, based on the offering of material slightly below the levels generally accepted. These have had scattered origin, with one or two sources mentioned in Oklahoma and North Texas and several once more in East Texas, while an Ohio refinery has been reported desirous of moving material, and carlot marketers report slightly more material available.

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

Corsicana (heavy) (June 17, 1933)	.90
East Texas	$1.00
Other fields	(See gravity table)

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933)	$ .70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (sept. 29, 1933)	.75
Pecos County, Yates shallow Pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties*	(See gravity table)

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Rocky Mountain States

Ilea. light (Sept. 29, 1933)	$ .96
Ilea, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	$1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 29, 1933)	(See Stanolind Mid-Continent price schedule)
Grass Creek, light (Sept. 29, 1933)	$1.18
Grass Creek, heavy (Sept. 29, 1933)	.62
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Lance Creek (Dec. 16, 1932)	.92
Hudson (June 2, 1931)	.65
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome, all grades (Feb. 16, 1935)	.57
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera (Sept. 29, 1933)	1.25
Sunburst (July 19, 1935)	1.20
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)	.75

Gulf Coast

Grade A and Grade B specification discontinued by leading buyers. (See gravity table)

Hardin (Aug. 5, 1935)	$.93
Tomball (see note)*	1.10
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (June 29, 1935)	.80
Refugio, light	(See gravity table)
Refugio, heavy (June 29, 1935)‡	.80
Conroe	(See Conroe gravity table)
Markham and High Island	(See Gulf Coast gravity table)
Bosco, La. (Jan. 18, 1935)§	$ .90

Anahuac and Dickinson posted by Humble August 20, 1935, price of 94 cents per barrel on 30-30.9 gravity with 2 cents per degree increase with top 40 gravity $1.14.

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 3 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co.. Cleveland and Hardin posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

Darst Creek	$ .87
Mirando (June 29, 1935)	.75
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (June 29, 1935)	.75
Saxet (June 29, 1935)	.80
Port Lavaca (July 1, 1935)	.80

Middle Western States

OHIO OIL CO

Lima (Feb. 1, 1935)	$1.15
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Midland, Mich. (Sept. 30, 1933)*	$1.02
West Branch, Mich.	.85
Oceana, Mich (Oct. 5, 1933)	.90
Somerset, Ky. (May 20, 1935)	1.13
Western Kentucky (May 22, 1935)	1.13

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co. Ashland, Ky., and posted prices includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective July 16, 1935)

Bradford, Pa.	$1.95
Allegany, N. Y.	1.95

SOUTH PENN OIL CO.
(Effective July 16, 1935)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$1.91
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.97
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.97
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.93

PENNZOIL CO.
(Effective July 16, 1935)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$1.92
Group B (Includes Titusville district.)	1.9.
Group C (Includes Turkey and Tidioute districts.	1.90
Group D (Includes Bear Creek and Porkey districts.	1.89
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	1.86

PURE OIL CO
(Effective July 16, 1935)

Cabin Creek, W. Va.	$1.62
Bradford Hollow, W. Va.	1.62
Kelly Creek, W. Va.	1.62

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.80

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$.955

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

Crude Oil Gravity Prices

Gravity—	Oklahoma and Kansas 1	North Texas, Central Texas and East Central Texas 2	North Louisiana and Arkansas 3	Gray County, Texas 4	Carson, Hutchinson and Moore Counties, Texas 5	Conroe, Texas 6	Salt Creek, Wyo. 7	Gulf Coast, Texas and Louisiana 8	Gulf Coast, Texas and Louisiana 9	Cotton Valley, Louisiana 10
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO. OF CALIFORNIA

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above these quoted take lowest price offered in that field.) (Standard Oil Co. prices effective August 29, 1935, and Union Oil Co. prices August 30, 1935.)

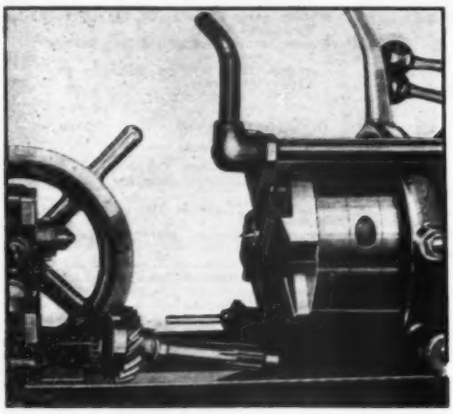
Gravity—	Signal Hill	Seal Beach, Alhamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens, Rosecrans, Dominguez	Elwood Terrace	Torrance	Richfield	Kettleman Hills	Whittier, La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall, McKittrick, Kern River	Mountain View	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	East Coyote	Santa Paula	Orcutt
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	....	$.65	$.65	....	$.65	$.65	$.65	....	$.57	$.57	$.57	$.57	$.57	$.57	$.65	$.57	....
15-15.9	.65	.65	.63	.63	.61	.63	....	....	.63	.63	....	.63	.63	.63	....	.57	.57	.57	.57	.57	.57	.63	.57	....
16-16.9	.63	.63	.61	.61	.58	.61	....	....	.61	.61	....	.61	.61	.61	....	.57	.57	.57	.57	.57	.57	.61	.57	$.57
17-17.9	.61	.61	.59	.59	.55	.59	....	....	.59	.59	....	.59	.59	.60	....	.57	.57	.57	.57	.57	.57	.59	.57	.57
18-18.9	.60	.60	.57	.57	.52	.57	....	....	.58	.57	....	.57	.58	.59	....	.57	.57	.57	.57	.57	.57	.57	.57	.57
19-19.9	.58	.58	.55	.56	.49	.56	....	....	.57	.56	....	.55	.57	.58	....	.57	.57	.57	.57	.56	.56	.55	.57	.56
20-20.9	.57	.57	.53	.55	.46	.55	....	....	.56	.55	....	.54	.56	.57	....	....	.57	.57	.57	.55	.55	.54	.56	.55
21-21.9	.56	.56	.52	.54	.43	.54	....	....	.55	.54	....	.53	.55	.56	$.57	....	.56	.56	.56	.54	.54	.53	.55	.54
22-22.9	.55	.55	.51	.53	.40	.53	....	....	.54	.53	....	.52	.54	.55	.56	....	.56	.56	.56	.53	.53	.52	.54	.53
23-23.9	.54	.54	.50	.52	.39	.52	$.55	....	.53	.52	....	.51	.53	.54	.55	....	.55	.55	.55	.52	.52	.51	.53	.52
24-24.9	.53	.53	.49	.51	.38	.51	.54	....	.52	.51	....	.50	.52	.53	.54	....	.54	.55	.54	.51	.51	.50	.52	.51
25-25.9	.52	.52	.48	.50	.37	.50	.53	....	.51	.50	....	....	.51	.52	.54	....	.53	.54	.54	.50	.50	....	.51	.50
26-26.9	.51	.51	.47	.49	.36	.49	.52	....	.50	.49	....	....	.50	.51	.53	....	.52	.53	.53	....	....	....	.50	....
27-27.9	.50	.50	.46	.48	....	.48	.51	....	....	.48	....	....	....	.50	.52	....	.51	.52	.52	....	....	....	.49	....
28-28.9	.49	.49	.45	.47	....	.47	.50	....	....	.47	....	....	....	.49	.51	....	.50	.51	.52	....	....	....	.48	....
29-29.9	.48	.48	.44	.46	....	....	.48	....	....	.46	....	....	....	.48	.50	....	.49	.50	.51	....	....	....	.47	....
30-30.9	.47	.47	.43	.45	....	....	.46	....	....	....	....	....	....	.47	.49	....	.48	.49	.50	....	....	....	.46	....
31-31.9	.46	....	....	.44	....	....	.45	....	....	....	....	....	....	.46	.48	....	.47	.48	....	....	....	....	....	....
32-32.9	....	....	....	.43	....	....	.44	....	....	....	....	....	....	.45	.47	....	.46	.47	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	$.50	....	....	$.62	....	....	.44	.46	....	.45	.46	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	.49	....	....	.61	....	....	.43	.45	....	....	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	.48	....	....	.60	....	....	....	.44	....	....	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	.47	....	....	.59	....	....	....	.43	....	....	....	....	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	.46	....	....	.58	....	....	....	.42	....	....	....	....	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	.57	....	....	....	.41	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	....	.56	....	....	....	....	....	....	....	....	....	....	....	....	....

East Coyote, Santa Paula and Orcutt prices posted by Union Oil Co. Playa Del Rey prices subject to 5-cent gathering charge. Elwood Terrace prices f.o.b. ship. Union Oil Co. pays 52 cents for 11-13.9 gravity oil in Coalinga, Kern River, Mount Poso, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills.

NEW OR IMPROVED EQUIPMENT

Attachment for Holding Work Introduced by Landis Co.

The Landis Machine Co. of Waynesboro, Pa., has developed a unique work-holding attachment for use on the Landmaco threading machines. The



accompanying illustration shows this attachment arranged for holding automobile clutch gears for the threading operation.

On this particular job it was necessary that the thread be concentric with the gear. In order to maintain concentricity the arrangement also included a live center, supported in the die head as illustrated. Thus, in effect, threading is done between centers. The gears are not rigidly clamped for the threading operation but are placed by hand over the mandrel. They are driven by lugs on the mandrel engaging with the internal gear. The mandrel has a hardened and ground-locating surface which serves properly to line up the gear for the threading operation.

The live center, which extends slightly beyond the face of the die head, is placed under spring pressure so that as the operator moves the carriage forward in order to bring the position of the gear to be threaded adjacent to the chasers, the center moves back into the bore of the head. The center operates in a hardened and ground bushing and has ample bearing surface to insure proper alignment.

The work-holding and driving mandrel are applied to a standard carriage front or vise on the Landmaco machine so that it can be applied readily or removed if the machine is to be used for regular threading work. The live center in the die head and machine spindle are removable.

Modification of the attachment as shown can be supplied for meeting similar operating conditions.

Here and There With Men Who Manufacture Equipment

Cooper-Bessemer Corp., Mount Vernon, Ohio, has appointed H. C. Jones general purchasing agent with headquarters in Grove City, Pa.

Louis H. Brendel has joined Consolidated Ashcroft Hancock Co., Bridgeport, Conn., as assistant sales manager of the Hancock valve division.

Charles Borland, president of Mohawk Rubber Co., Akron, Ohio, has announced the appointment of J. L. Earl as vice president and general manager.

G. B. Mattingley, formerly with Edge Moor Iron Co., is now in the boiler sales division of Henry Vogt Machine Co.'s Philadelphia office in the Commercial Trust Building. J. C. Mahoney, formerly with C. H. Leach Co. and Alco Products, Inc., is in Vogt's heat exchanger sales division of the New York office, 80 Broad Street.

Shand & Jurs Co., Berkeley, Calif., manufacturer of petroleum storage tank fittings, has promoted Eugene E. Jurs, purchasing agent, to assistant to the manager of the company's eastern offices in New York.

J. H. Brown, formerly eastern sales manager of Sullivan Machinery Co., has joined Worthington Pump & Machinery Corp. as regional manager of its mining and construction division, with headquarters in Chicago.

Charles R. Parker, former geologist and contracting driller in the Mid-Continent area, has joined the sales force of Pittsburgh Equitable Meter Co., and its subsidiary, Merco Nordstrom Valve Co. He will operate from the Tulsa factory of these companies, specializing in the sale and service of Emco gas meters and regulators, Pittsburgh oil meters and Nordstrom lubricated plug valves.

A bronze plaque was presented to Wilbert Wear, president of the Harrisburg Steel Corp., Harrisburg, Pa., by the employes expressing appreciation of the company's co-operation in recreation activities.

Gilbert & Barker Manufacturing Co. has announced to those interested in the sale of Gilbarco oil heating and air conditioning products that following negotiations with F. Gilbane, Inc., an agreement has been reached whereby Gilbane has discontinued the trade name Gilbaco for any of its products. There had been confusion.

Directors of the J. P. Devine Manufacturing Co., Inc., have chosen the following officers: C. W. Reynolds, president and director; J. A. Guyer, executive vice president and director; W. A. Jackson, secretary and treasurer; H. H. Cust, assistant secretary, assistant treasurer and director. H. R. Campbell was made a vice president.

Flexible Operation Is Feature of the New BJ Slip Elevator

An improved type of side-door slip elevator for casing or drill pipe announced by Byron Jackson Co., 2150 East Slauson Avenue, Los Angeles, is designed to handle long strings of pipe without allowing any of the weight to be carried by the coupling or collar. With four long slips to grip on the pipe at any point, it is said to have many times the capacity required to handle the longest and heavi-

est strings ever run. It requires only one man on the derrick board when setting casing.

The side-door construction permits it to be placed on or removed from the casing without disconnecting or removing the circulating or cement heads. It is readily released for use elsewhere while new cement is setting. Two safety latches held the side door positively closed and locked. The door interlocks with the body, minimizing any outward thrust against the door to prevent it from being opened while the load is being carried.

The door and body of the elevator carry four interlocking extra-long, spring-floated slips which set uniformly and evenly around the entire circumference of the casing. The slips are of such large area that they prevent crimping or crushing of the pipe under the heaviest of loads. Each elevator accommodates several sizes of slips.

The Kelly-Springfield Tire Co. has completed its reorganization whereby Goodyear Tire & Rubber Co. acquires financial control. Kelly's manufacturing and sales operations will be independent.

Bridgeport Has Landing Field at Its Door

Bridgeport Machine Co., Wichita, Kans., manufacturer of oil-field equipment, has overcome one of the drawbacks to use of the airplane in everyday business, namely the inconvenience and delay in getting from the office to the landing field.

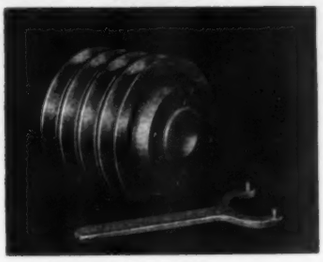
Fifteen years ago when Bridgeport's factory site was acquired, a plot of ground adjoining the general offices and administration building was reserved with the thought that the company might find it practical later to use an airplane. This plot, several hundred feet wide and over 2,500 feet long, has been converted into a modern airplane landing field, level and rolled smooth.

An executive of the company can leave his office, walk 20 feet to the waiting plane and be in Tulsa within the hour, or in Casper, Wyo., in less than half a day. A customer of the company can land and step at once into Bridgeport's office or factory. Bridgeport maintains its own cabin type, four-passenger airplane with a full time pilot.

Vari-Pitch Texrope Sheave Is Offered by Allis-Chalmers

Allis-Chalmers Manufacturing Co., Milwaukee, Wis., offers a new development in power transmission, of wide oil-field use and known as the Vari-Pitch texrope sheave.

By means of a simple adjustment the pitch diameter of this new sheave can be changed so



as to give variations in speed as high as 15 to 25 per cent per sheave. If both sheaves of a drive are of this new type the range of variation can be doubled.

These Vari-Pitch sheaves are made in two multi-groove types, stationary and motion controlled. The stationary controlled type is recommended for applications that require occasional change of speed and the motion controlled for applications that require frequent quick changes within the full range while the drive is in operation.

The Vari-Pitch sheave drive, which uses texrope belts, retains the advantages of the texrope drive and will find useful application to a wide variety of industries having variable speed requirements. It permits higher or lower speed operation according to the product range requirements of the driven machine. The Vari-Pitch sheave is said to be especially desirable for V-belt drives formerly employing several sets of sheaves to meet the occasional changes in speed.

A. E. Seaward has been named manager of the Los Angeles unit of Goodrich Silvertown Stores at 810 South Grand Avenue.

New General-Service Pump Is Made by Gardner-Denver

Gardner-Denver Co., Quincy, Ill., is introducing a new line of centrifugal side-action pumps designed for general service conditions.

Higher efficiency with less power consumption was one of the principal objectives, Gardner-Denver engineers say, in designing the Type B and C pumps, which handle capacities up to 500,000 gallons per day, or 450 gallons per minute, at heads up to 100 feet.

The blade angles of the impeller, as well as the water channels, are designed to produce the most efficient operation over a broad working range. Only a minimum of machining is done in the impellers, so that the hard outside skin, normal to cast iron, is preserved to give long life, particularly where abrasive materials are handled. Smoothness is obtained by means of a special foundry process.

Compactness and simplicity are features. The only moving parts are the shaft, impeller and bearing. The thrust bearing is made adjustable to take up wear between the impeller and the casing. The pumps are sturdy. Frames are one-piece castings constructed of close-grained cast iron accurately machined to fit the bearings and the volute.

Bulletins, Booklets and Other Literature for the Trade

Lincoln Electric Co., Cleveland, Ohio, is sending out mailing pieces describing the Lincoln XLA automatic motor starter and the XLB-XLBB automatic A. C. motor starters.

Two bulletins are announced by Pennsylvania Pump & Compressor Co., Easton, Pa. No. 163 describes the company's steam booster compressor. No. 164 describes its air-cushion-valve single-stage horizontal roller bearing.

"Stainless and Heat-Resisting Castings" is the title of a four-page bulletin obtainable from Cooper Alloy Foundry Co., Elizabeth, N. J.

Two pamphlets brought out by Walter Kidde & Co., 140 Cedar Street, New York, describe Lux portable fire extinguishers.

Bulletins 162 and 110, offered by Novo Engine Co., Lansing, Mich., give details concerning that company's new line of pressure pumps for water-supply and oil-field pickup service.

A bulletin offered by Kibele Manufacturing Co., Dallas, Tex., describes in detail a tubing-catcher providing greater area of slips and other improvements.

Waukesha oil-well pumping engines are described and illustrated in a bulletin from Waukesha Motor Co., Waukesha, Wis.

Airco's new folder on its portable tensile and bend testing machine may be obtained from Air Reduction Sales Co., Lincoln Bldg., New York.

A bulletin issued by Yale & Towne Manufacturing Co., Philadelphia, Pa., tells about the new Yale "Pul-lift," described as "the tool of a thousand uses."

The Monsanto Chemical Co., St. Louis, Mo., has issued two interesting bulletins: No. 107, "Removing Oxygen From Boiler Feed Water" and No. 108, "Inhibited Acids." Free copies may be obtained from the St. Louis office.

A five-page letter-bulletin prepared for distribution by Black, Sivalls & Bryson, Inc., Oklahoma City, Okla., discusses the "Big Manholes of BS&B Separators," and provides interesting photographs.

Men Widely Known in the Equipment Field

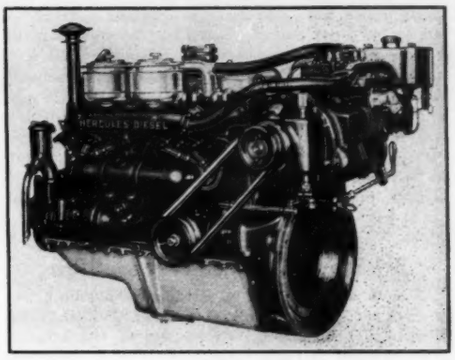
Reed Roller Bit Co. has appointed F. C. Gignoux director of research. After graduating from the University of Nevada with degrees in mechanical

F. C. GIGNOUX

engineering, Mr. Gignoux served nine years with the Shell Petroleum Corp. in the engineering and construction department. The last three years with this organization were spent in foreign fields. In 1927 he joined Reed Roller Bit Co.

Gasoline Engine for Starting Diesels Is Put on Market

For certain applications a gasoline engine has advantages for starting the Diesel engine. The Hercules Motors Corp., Canton, Ohio, offers such



a starting unit on both the DHXB six-cylinder 5x6 inch, and the DRXB six-cylinder 4⅜x5¼ inch Diesel engines and power units.

The gasoline engine used is the Hercules Model ZXB, a four-cylinder, 2⅝x3 inch. This engine is equipped with magneto, air cleaner, governor and other accessories, including a small gasoline tank, ready for instant operation. The controls, switch, choke, crank and throttle are located on the front of the engine, which is on the right side of the Diesel, looking at the flywheel end, where they are easily accessible.

This engine cranks the Diesel engine by a pinion on the usual flywheel ring gear. The gasoline engine drives the pinion by V belts, a flexible yet positive drive. A clutch disengages the gasoline engine from the V-belt drive to facilitate starting the gasoline engine.

This starting arrangement is not intended to supplant electrical equipment, but was developed for use where it would have advantages over electrical equipment, particularly in foreign markets. It is of value also under conditions in which maintenance of batteries is difficult.

Screening Unit Is Developed For Reconditioning Mud

Allis-Chalmers shale shaker, announced by Allis-Chalmers Manufacturing Co., Milwaukee, Wis., for reclaiming and conditioning rotary drilling mud, is a mud screening unit consisting of a mud feed box, vibrating screen and mud discharge, all mounted on a heavy steel frame and skids. Any standard mud flow pipe can be connected to one or more covered openings in the feed box or, if preferred, a feed trough can be used.

The vibrating screen is "free swung" on coil compression springs and driven through V-belts from an electric motor or steam turbine mounted "dead" out of the way on top of the frame. Angle of screen can be changed by simply turning nuts above the coil springs. "Arch-braced" screen cloth is in two sections, with automatic constant tension. Intensity of vibration is adjusted from minimum with no removable weights.

Improvement in Timken Bearing

Now being applied to Timken bearings as rapidly as the special equipment required can be built and installed, is a major improvement termed "mirror finish" by the company. Even the standard finish on Timken bearings is smooth to the delicate eye and finger nail test, which hardly can detect any irregularities in the finely ground surface, yet this new "mirror finish" is infinitely smoother. The normal irregularities of finished surfaces are essentially blunt, but when compared to the smoothness of a "mirror finished" piece, even the finest work heretofore possible seems rough. The "mirror finish" still further improves the operation, precision, and friction reducing characteristics of Timken tapered roller bearings.

Royal Offers Two Oil-Country Products for Cleaning Use

The Royal Manufacturing Co., Tulsa, has introduced a new product in the oil fields, Royal water jacket cleaner, manufactured in a paste form and containing no moisture. It is colloidal in its action and said to be practically neutral. A similar product manufactured by the company for use in cleaning condensers in refineries and natural gasoline plants is Royal condenser cleaner. Patents have been applied for.

In order to maintain a correct volume of the material in the circulating water, a color chart is furnished so that the operator can keep the water up to a reddish purple. In that way he will know that he has enough material in the water to do the required work correctly.

Bridgeport Installs Neon Sign

A neon sign installed by Bridgeport Machine Co. on the roof of one of its factory buildings in Wichita, Kans., is said to be one of the largest 10 such signs in the United States. It is designed for day and night visibility and is detailed in colored neon tubes on an enameled steel background. It bears the company's trademark, a reproduction of the American buffalo, the name Bridgeport, and the words "Oil Field Equipment." The sign has an overall length of 160 feet and a height of 60 feet. The buffalo is 27 feet high and the company name is constructed of letters 9 feet high. The sign has an illuminated surface of 3,146 square feet, and contains over a quarter of a mile of glass tubing. More than a half mile of high-tension insulated electric cable went into the sign, which weighs nearly 12 tons.

Monobloc Condensate Return Units

One of the latest developments by Worthington Pump & Machinery Corp., Harrison, N. J., is a complete series of 54 sizes and types of automatic Monobloc condensate return units applicable to a wide variety of services, as for steam heating systems and for steam process plants.

Uneasiness in Eastern Markets Due to California Conditions

(Continued from Page 103)

1 to 3 cents a gallon. New Jersey has a large bus, truck and other commercial business and it is said that special price concessions are being offered this trade. Third grade gasoline has been reintroduced by a few major companies at several points but several companies do not feel that this is a satisfactory method of meeting this type of competition and there is a threat to reduce the regular branded grades, of these companies. A similar situation obtains in western New York where retail prices were reduced 1 cent in Syracuse last week.

There is evidence of trouble in the Metropolitan New York situation also. The retail price on the regular branded grades is 19.3 cents over most of the city, or 2.3 cents more than the New Jersey price and more than 3 cents higher than the nearby Connecticut prices. These differences are partially explained by the fact that total Federal and state taxes in Connecticut are 3 cents, 4 cents in New Jersey and 5 cents in New York State. This fact, however, does not keep the consumers from buying in Connecticut or New Jersey when they can and this is apparently being done on an increasing scale. In addition the jobber buying on tank car basis in New York now has a margin of from 7½ to 8½ cents under the net retail price on which to operate. He is in a position to offer dealers wider margins than the 4 to 4½ cents they are obtaining from the major companies. It is due to this situation that predictions are heard that the New York price will be reduced in the near future.

Prices

The price on 200-3 Pennsylvania neutral oil is now 28 to 28½ cents in barrels and 21 to 21½ cents in bulk. This is the season for an increase in neutral oil demand for blending winter oils but so far the demand has been disappointing. The No. 8 bright stock (25 viscosity Pennsylvania) continues at 24 cents in barrels.

With the one-eighth cent reduction, 123-125 wax is 3½ cents and 128-130 4⅛ cents for export. The crude scale grades are quoted from 1.90 to 2.10 per pound for 122 to 126 melting points.

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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

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PRODUCING OIL ROYALTIES
Bought (Wholesale) Sold.
Inquiries invited from Oil Companies, Bankers, Dealers.
M-K OIL COMPANY, INC.
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OIL ROYALTIES
Bought — Sold
S. J. Jewell
Philtower
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PRODUCING OIL ROYALTIES
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CALIFORNIA ROYALTIES
Specializing in Signal Hill. Schedules and Engineer's Reports furnished. Inquiries invited. A. J. Merrick & Co., 650 S. Spring Street, Los Angeles, California.

Royalties—Production

ANDREW J. BARRETT
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DEALERS IN ODD LOTS
EAST TEXAS AND VAN POOL
PRODUCING OIL ROYALTIES
We Buy and Sell.
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CALIFORNIA OIL ROYALTIES
Dealers Only.
Signal Hill—Huntington Beach
Kettleman Hills
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Royalties—Production

I BUY AND SELL oil royalties and producing wells, East Texas field. B. A. SKIPPER, Longview, Texas.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Okla.

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Producing and non-producing royalties in salt dome fields of Texas and Louisiana.
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Dealers—Salesmen to handle overriding royalty on Pennsylvania lease now in course of development. Filed with Securities & Exchange Commission. William H. Conlin, 535 Fifth Ave., New York, N. Y.

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Income Producing Royalties
Mid-Continent Field
Harry A. George
427 Perrine Bldg., Oklahoma City, Okla.

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Bought, Sold and Quoted.
HENRY L. BAKER CO.,
207 Van Nuys Bldg.,
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Telephone Trinity 7391.

BETTER CLASS
MONTHLY PAYING ROYALTIES
Quoted Dealers Exclusively.
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105 West Adams Street
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Dealers in Oil Royalties since 1918.

Van—East Texas—Louisiana Royalties
Bought—Sold.
WILLIAM MONROE LAYTON
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FOR SALE: 1/64 royalty of 160 acres, Sec. 21, block 46, Andrews County, Texas. Alfred Deles, Electra, Texas.

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GAS TESTING
Field tests for gasoline content, orifice meters tested, chart computations.
OKLA. METER & GAS TESTING CO.
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4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
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7 Lines	$2.45	$4.20	$5.95	$7.70
8 Lines	2.80	4.80	6.80	8.80
9 Lines	3.15	5.40	7.65	9.90
10 Lines	3.50	6.00	8.50	11.00

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma